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Ameren Missouri (“Ameren”) respectfully submits the following proposed conclusions of law for the remedy phase of this case. Ameren has separately submitted proposed findings of fact (hereinafter cited as “AFOF”).

I. Introduction

In the remedy phase of this enforcement action against Ameren’s Rush Island power plant under the Prevention of Significant Deterioration (“PSD”) regulations of the Clean Air Act’s (“CAA”) New Source Review Program (“NSR”), Plaintiffs seek not only an injunction requiring PSD compliance at Rush Island, but also a second injunction against Ameren’s separate Labadie power plant that would require Ameren “to limit the emissions from Labadie going forward.” (Pls.’ Closing, Vol. 6 at 30:3-4.) Labadie has nothing to do with this case or any other lawsuit for any alleged violation, and is not the subject of regulatory enforcement here. However, Plaintiffs reason that “plants like Labadie aren’t innocent or not; companies are. And Ameren is a liable party here,” so the Court should impose a mandatory permanent injunction against Labadie anyway (*id.* at 31:4-5), notwithstanding that it is a “totally innocent boiler.” *United States v. Westvaco Corp.*, 2015 WL 10323214, at *12 (D. Md. Feb. 26, 2015). The injunction Plaintiffs seek against Labadie would be unprecedented and improper, both as a matter of law and based on the evidence.

Moreover, for each of the two injunctions they seek, Plaintiffs must carry their burden of proof and satisfy the four-factor *eBay* test. They have failed to do so for either injunction. Even if the Court determines that some injunctive relief is warranted against Rush Island, the specific injunction requested by Plaintiffs—requiring installation of flue gas desulfurization equipment (“FGD” or “scrubbers”)—would impose far too great a cost on Missouri rate payers compared to installing dry sorbent injection equipment (“DSI”) at Rush Island, as Ameren has proposed. The Court should deny Plaintiffs’ request for any injunction against Labadie, period. And the Court

should deny Plaintiffs' requested injunction against Rush Island, either outright or, at most, by requiring Rush Island to obtain a minor permit or requiring the installation of DSI instead of scrubbers.

A. Summary of Why No Injunction Is Warranted Against Labadie

Plaintiffs' claim for injunctive relief at Labadie rests on an assumption of harm derived from tools and theories that may be appropriate for directionally guiding policy, but are wholly inadequate to meet Plaintiffs' legal burden to prove the requisite causal link between emissions at Rush Island and quantifiable health benefits in a court of law. Plaintiffs have taken air modeling and epidemiology studies that are blunt instruments that provide direction to policy-makers, and attributed a mathematical precision to them that is inappropriate. Although Plaintiffs' positions implicate several important standards set by EPA, Plaintiffs did not present EPA modelers or scientists to testify. Instead, Plaintiffs presented a series of hired outside experts—Dr. Staudt, Mr. Chinkin, and Dr. Schwartz—who created dots that Plaintiffs try to connect to show that sulfur dioxide (“SO₂”) emissions from Rush Island converted to fine particulate matter (“PM_{2.5}”), which then resulted in harm ultimately expressed by Dr. Schwartz as a number of “excess deaths.” On cross-examination, however, every link in this causal chain fell apart. Although the formulas Plaintiffs' experts created attribute health impacts to the tiniest increase in PM_{2.5}, that relationship is purely theoretical and has no real-world impact.

This Court need look no further than Plaintiffs' actions in this case to find proof positive that their theory has no practical application. If EPA's theory that “excess” SO₂ emissions from Rush Island risked hundreds of deaths had any validity, EPA and DOJ would have sought a temporary restraining order and preliminary injunction the day they filed the instant Complaint. EPA and DOJ never sought a TRO or PI to prevent deaths because none were occurring and no risk was meaningfully elevated. There is no other explanation for Plaintiffs' course of action.

Plaintiffs' theory fails at every level. It's starting point, Dr. Staudt's estimate of "excess" SO₂ emissions from Rush Island's post-project operation, flies in the face of the Eighth Circuit's holding in *Otter Tail* that operation of a power plant after having failed to obtain a construction permit or to comply with hypothetical operational parameters does not violate the law. *See Sierra Club v. Otter Tail Power Co.*, 615 F.3d 1008, 1015, 1016 (8th Cir. 2010). Plaintiffs' theory that every day of post-project operations resulted in "excess" emissions squarely conflicts with Eighth Circuit law. Such a false premise undermines each of the subsequent experts who rely upon, and assume the validity of, Dr. Staudt's "excess" emissions estimate. That is the first, but far from the last, unsound and uncertain link in Plaintiffs' chain.

For example, Mr. Chinkin's dispersion modeling used uncertain inputs to mathematically generate uncertain outputs that dramatically overstated PM_{2.5} concentrations compared to real-world air quality monitors. Despite being overstated, his modeling results turned out to be tiny increments—thousandths of a microgram per cubic meter ($\mu\text{g}/\text{m}^3$) of sulfate PM_{2.5}—that are orders of magnitude smaller than naturally occurring variations in PM_{2.5} concentrations and EPA's Significant Impact Level ("SIL"), which is a threshold for statistical meaningfulness. None of those tiny modeled sulfate PM_{2.5} increments contributed to any exceedance of the National Ambient Air Quality Standards ("NAAQS"), which EPA set at levels that protect public health, including the most sensitive populations, with an adequate margin of safety. Plaintiffs conceded that "[t]he air is cleaner today, and there's no disputing that." (AFOF ¶ 26.) Mr. Chinkin conceded that it would not have "even ma[d]e sense" for him to look at whether "excess" emissions "contribut[ed] to a violation of the NAAQS downwind" because "there weren't any NAAQS [nonattainment] areas to violate." (AFOF ¶¶ 28, 30, 37.) EPA set the PM_{2.5} NAAQS at a level that protects public health and prevents risks of even unknown harm

from PM_{2.5}, without any consideration of costs of achieving that level. Plaintiffs concede that air quality is even better than the NAAQS level; yet they advance a theory that either ignores or, at best, flatly contradicts EPA's determinations.

Next, Dr. Schwartz presented a round number of “excess deaths,” but then conceded that this was really an aggregation of minute estimates of increased risk of dying that are stretched across and multiplied by large populations—such as 0.000008 (8 in 1 million) for a person in the location with Mr. Chinkin's *highest* model-predicted PM_{2.5} concentration change. Just like Mr. Chinkin, Dr. Schwartz combined thousands of tiny increments. He also made a series of unsupportable assumptions that were exposed on cross-examination. Dr. Schwartz assumed, without proof, that associations between large changes in PM_{2.5} concentrations (*e.g.*, 20 µg/m³) and health effects observed in epidemiology studies remain even for the tiny increments modeled by Mr. Chinkin, even though available evidence actually refutes such an extrapolation. Dr. Schwartz's conclusion depends upon his assumption that all types or components of PM_{2.5} are equally toxic, even though he admitted that the specific type of PM_{2.5} that Mr. Chinkin modeled—sulfate PM_{2.5}—is not as toxic as other types of PM_{2.5} and may not be toxic at all, as shown by numerous studies, including Dr. Schwartz's own work. His assumption of equitoxicity and reliance on a dose-response relationship for generic all-component PM_{2.5} is not scientifically valid. *See, e.g., Cavallo v. Star Enter.*, 892 F. Supp. 756, 766 (E.D. Va. 1995), *aff'd in relevant part*, 100 F.3d 1150 (4th Cir. 1996) (requiring expert to “explain why the dose-response figures found in” studies identifying a different chemical-harm relationship than the chemicals at issue “can reliably be transferred to the case at bar”).

Dr. Schwartz's theory of harm is based solely on the claim that sulfate PM_{2.5} *can* make metals soluble, but he conceded that he did no analysis whatsoever to determine whether any

sulfate PM_{2.5} modeled from Rush Island's SO₂ emissions actually caused any metals to become soluble. In fact, Rush Island's SO₂ emissions had no impact on metal solubility as shown by Ameren's expert, Dr. Valberg. Further, the example of soluble metal Dr. Schwartz' used in his theory was iron, a metal that is not toxic. Ameren's expert witnesses further demonstrated and reinforced the multiple gaps, inconsistencies, and weaknesses in Plaintiffs' theory. Plaintiffs offered no rebuttal case.

Recognizing that these flaws had been exposed and their PM_{2.5}-based harm theory debunked, in closing argument Plaintiffs' counsel sought to minimize their burden of proof: "We don't have to prove c[ause] in fact or proximate cause. We don't have to provide the exact extent of the harm. . . . [T]he risk of harm alone can justify an injunction." (Pls.' Closing, Vol. 6 at 25:15-17, 25:21-22.) Plaintiffs will make their burden-minimization arguments even more vehemently in their post-trial brief. Plaintiffs' attempt to understate their burden under the law highlights their failure to meet that burden on the evidence. In closing argument, Plaintiffs' counsel all but abandoned a PM_{2.5}-based harm theory and instead fell back on arguing that the 40-ton PSD applicability threshold for SO₂ matters for harm: "[W]hile Ameren has talked about micrograms and dose response and those type of things, the real comparison in this case has to be to the 40-ton threshold that triggers PSD" (Pls.' Closing, Vol. 6 at 21:16-18.) Yet, before closing argument, Plaintiffs never suggested that they would show harm based on the PSD threshold for SO₂—their theory of health impacts was always PM_{2.5}-based. Plaintiffs' eleventh-hour bait-and-switch claim that harm is based on a PSD limit is crosswise with their own "excess" emissions estimate that was the foundation of their entire evidence presentation at trial. Their estimate of 160,000 "excess" tons has nothing to do with the PSD threshold for SO₂ emissions (pre-project baseline plus 39 tons), and instead is premised on Plaintiffs' arguments

about best available control technology (“BACT”) emissions limits, which their experts—using models, statistical associations, and assumptions—then converted into PM_{2.5} increments, and then “excess deaths.” Indeed, Plaintiffs presented no evidence whatsoever showing harm from any amount of direct SO₂ emissions. This shift in approach was necessary because the harm theory they actually attempted to present at trial failed.

Moreover, even if Plaintiffs’ original theory were accepted at face value, by their logic, Ameren must be credited for its successful efforts to reduce SO₂ emissions at the four coal-fired power plants in its fleet, all of which are located within a 40-mile radius of St. Louis. By Plaintiffs’ logic, every ton of SO₂ emissions that Ameren reduced at its Sioux, Meramec, and Labadie power plants in 2009, 2010, 2011, and after that would offset concurrent “excess” SO₂ emissions from Rush Island in the same airshed at the same time. According to Plaintiffs, reductions in SO₂ emissions at other coal-fired power plants in Ameren’s fleet decrease the risk of dying, counteracting on a ton-for-ton basis the increased risk from “excess” SO₂ emissions at Rush Island. It is undisputed that Ameren reduced SO₂ emissions at Sioux, Meramec, and Labadie by more than the “excess” SO₂ emissions that Plaintiffs attribute to Rush Island. Moreover, those other plants’ reductions occurred contemporaneously, so offsetting occurred contemporaneously. Although Plaintiffs did not address, much less credit, those emission reductions during trial, their own logic requires doing so. They argue that “plants like Labadie aren’t innocent or not; companies are”—and so it follows that SO₂ emissions reductions by the company at other plants must be credited on a ton-for-ton basis. The ton-for-ton SO₂ emissions reduction Plaintiffs seek in their injunction against Labadie already occurred years ago and thus, there is no need for an injunction against Labadie even if the Court accepts Plaintiffs’ theories.

Plaintiffs' failure to prove their harm theory means they cannot carry their *eBay* burden for the injunction they seek against Labadie. Even accepting the theory in principle, the certain real-world costs of that injunction far outweigh the uncertain benefits from reduced harm that Plaintiffs have theorized. Overall costs to ratepayers would exceed a billion dollars, equating to thousands of dollars per customer, no matter what technological or other approach could be used "to limit the emissions from Labadie going forward." Those certain, concrete costs contrast starkly with the theoretical benefits, which are riddled with compounding uncertainties:

- Dr. Staudt's "excess" emissions assumption violates *Otter Tail*. (See Sections III.A & III.B below.)
- Plaintiffs' assumption that health harms have occurred in areas attaining the PM_{2.5} NAAQS is contradicted by EPA's determination that the NAAQS protect public health. (See Sections III.A & III.C.1.e below; AFOF ¶¶ 22-31, 36-37, 83, 96-109, 135.)
- Dr. Schwartz's assumption that all types of PM_{2.5}, including sulfate PM_{2.5}, are equally toxic was disproven by the evidence at trial. (See Sections III.A & III.C.1.h below; AFOF ¶¶ 84, 133-34, 136-65.)
- Dr. Schwartz relied on certain epidemiology studies, disregarding that such studies observe statistical associations but cannot establish causation and that they reach widely diverging results, many of which are statistically insignificant. (See Sections III.A & III.C.1.g below; AFOF ¶¶ 77-82, 131-32, 166-69.)
- Mr. Chinkin attributed meaning to tiny model-predicted changes in PM_{2.5} that were orders of magnitude smaller than EPA's threshold for meaningfulness, the SIL. (See Sections III.A & III.C.1.d below; AFOF ¶¶ 67-76, 173-214)
- Using Mr. Chinkin's tiny model-predicted changes, Dr. Schwartz converted those to minute increases in risk (e.g., eight in a million) that he assumed, without evidence, would occur. (See Section III.A below; AFOF ¶¶ 85-92, 170-72.)
- And Mr. Chinkin's air modeling itself was relied on numerous uncertain inputs and imperfect mathematical simulations, and substantially overstated PM_{2.5} concentrations compared to real-world monitors. (See Sections III.A & III.C.1.c below; AFOF ¶¶ 57-66, 215-230, 241-57.)

EPA emphasizes that "[w]hen the uncertainties from each stage of the analysis are compounded, even small uncertainties can have large effects on the total quantified benefits."

(AFOF ¶ 93.) Plaintiffs’ theory of harm in this case demonstrates the importance of heeding EPA’s warning.

Beyond the *eBay* balancing test, the injunction sought by Plaintiffs against Labadie fails on several legal grounds as well, discussed below. Accordingly, no injunction is warranted against Labadie. If the Court disagrees and chooses to award some relief for mitigation or remediation, then such relief should be limited to ordering retirement of SO₂ emissions allowances.

B. Summary of Why Plaintiffs’ Requested Injunction Against Rush Island Should Be Denied

The separate injunction that Plaintiffs seek against Rush Island is based on compliance with PSD, or at least Plaintiffs’ view of what PSD compliance requires in Missouri.¹ The costs of Plaintiffs’ proposed remedy, however—scrubbers—far outweigh any benefit to the ratepayers, who Plaintiffs’ expert, Mr. Kahal, testified would bear the costs through increased rates. DSI is the far more cost-effective alternative. The evidence is undisputed that (1) both technologies effectively control and would reduce SO₂ emissions; (2) the overall net reduction of SO₂ would be similar as between scrubbers and DSI due to timing of installation and dispatch effects; and (3) DSI would be five times less costly to rate payers.

Because the balancing based on the evidence weighs in favor of DSI instead of scrubbers, Plaintiffs aggressively argue that a “top-down” methodology for evaluating BACT found in a

¹ In contrast, Plaintiffs have vigorously argued that they are *not* seeking a PSD remedy against Labadie. Plaintiffs recognize that the injunction they seek against Labadie is based entirely on equity—“a basic equitable principle that for every wrong, there is a remedy.” (Pls.’ Opening, Vol. 1A at 12:24-25.) It is not based on statutory or regulatory requirements. This distinction is important—for example, to the extent that Plaintiffs argue that enforcing PSD compliance justifies diluting their burden of proof. (*See* Pls.’ Closing, Vol. 6 at 25:15-22.)

1990 draft manual from an NSR workshop preordains that scrubbers—and only scrubbers—constitute BACT, and dictates that DSI is not even an option to consider. This argument is wrong for a number of reasons. By asserting that scrubbers are the one and only option, Plaintiffs apply a different standard—the Lowest Achievable Emission Rate (“LAER”)—which does not account for costs in the analysis. But LAER, used in non-attainment areas, does not apply in this case. In contrast, consideration of costs and cost-effectiveness are required as part of a BACT analysis even under the “top-down” methodology in the 1990 draft NSR manual, and the Missouri Department of Natural Resources (“MDNR”)—the relevant permitting authority—evaluates cost-effectiveness when determining BACT. In short, Plaintiffs cannot erase DSI from consideration. If BACT is warranted against Rush Island, DSI would sensibly balance the costs and benefits for ratepayers to achieve further reductions in SO₂.

II. Legal Standards for Injunctive Relief

A. Plaintiffs Bear the Burden of Establishing Entitlement to Injunctive Relief.

The burden of establishing that an injunction should issue rests fully on the party seeking the injunction. *See eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (holding that “a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief”); *Brown v. City of Ferguson, Missouri*, No. 4:15CV00831 ERW, 2015 WL 8313796, at *5 (E.D. Mo. Dec. 9, 2015) (holding that “[t]he burden of proving the need for an injunction rests with the plaintiff.”) A party seeking injunctive relief must show that it faces a threat of ongoing or future harm. *Park v. Forest Serv. of U.S.*, 205 F.3d 1034, 1037 (8th Cir. 2000); *Sierra Club v. Tennessee Valley Auth.*, 592 F. Supp. 2d 1357, 1377 (N.D. Ala. 2009) (holding that “[p]laintiffs have failed to show that they are entitled to injunctive relief” to remedy the defendant’s Clean Air Act violations).

B. The *eBay* Factors Apply to Both Injunctions Sought by Plaintiffs.

As this Court indicated in its Memorandum and Order ruling on the parties' summary judgment motions, the *eBay* four-factor test applies to both injunctions sought by Plaintiffs in this case. (ECF #1045 at 14, 16-18.) The *eBay* four-factor test requires a plaintiff to prove: ““(1) that it has suffered an irreparable injury”” caused by the defendant; ““(2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.”” *Id.* (quoting *eBay*, 547 U.S. at 391).

The Supreme Court has rejected the argument that a statutory violation requires a district court to issue an injunction. *See Winter v. NRDC*, 555 U.S. 7, 32 (2008). “It goes without saying that an injunction is an equitable remedy [that] . . . ‘is not a remedy which issues as of course.’” *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311-13 (1982) (citation omitted) (stating that “[t]he grant of jurisdiction to ensure compliance with a statute hardly suggests an absolute duty to do so under any and all circumstances, and a federal judge sitting as chancellor is not mechanically obligated to grant an injunction for every violation of law,” and concluding that the Federal Water Pollution Control Act did not require the district court to issue an injunction to ensure compliance because its provisions provided for non-injunctive remedies). This is equally true in the context of alleged environmental harm. *See Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 157 (2010) (rejecting prior case law holding that an injunction is presumptively proper to remedy a NEPA violation). Instead, “the traditional four-factor test applies when a plaintiff seeks a permanent injunction to remedy a [statutory environmental] violation.” *Id.* *See also LAJIM, LLC v. Gen. Elec. Co.*, 917 F.3d 933, 943 (7th Cir. 2019) (determining that “the Supreme Court applies traditional equitable principles to environmental statutes” and affirming

the district court's denial of a mandatory injunction under the Resource Conservation Recovery Act based on evidence that no additional remediation was necessary); *The Lands Council v. McNair*, 537 F.3d 981, 1005 (9th Cir. 2008) (en banc) ("declin[ing] to adopt a rule that *any* potential environmental injury *automatically* merits an injunction" and holding that the law "does not . . . allow us to abandon a balance of harms analysis just because a potential environmental injury is at issue") (emphasis in original). "When a federal statute authorizes injunctive relief, the presumption is that Congress intends the courts to exercise their traditional equitable discretion." *Sharp v. Parents in Cmty. Action, Inc.*, 172 F.3d 1034, 1038 (8th Cir. 1999) (citing *Romero-Barcelo*, 456 U.S. at 311-20 (1982)).

The four-factor *eBay* balancing test applies to each injunction separately. *See Brady v. United of Omaha Life Ins. Co.*, 902 F. Supp. 2d 1274 (N.D. Cal. 2012) (denying the plaintiff's request for relief in the form of three injunctions limiting the defendant's actions and analyzing each injunction separately under the *eBay* factors); *Autopartsource, LLC v. Bruton*, No. 3:13CV54-HEH, 2013 WL 3766524, at *13 (E.D. Va. July 16, 2013) (applying the *eBay* factors to each form of injunctive relief requested by the plaintiff and determining that although the public interest would be served by enjoining defendant's use of trade secrets, it would not be served by enjoining the defendant from competing as a distributor); *see also Coin-Tainer Co., LLC v. Pap-R Prod. Co.*, No. 19-CV-234-NJR-RJD, 2019 WL 1873494, at *3 (S.D. Ill. Apr. 26, 2019) (determining that, where the plaintiff sought three injunctions preventing defendants from using the plaintiff's name, codes, and assets, "[e]ach will be evaluated in turn.") Plaintiffs agree. (*See* Pls.' Trial Br. at 2-3, 5-6, ECF #1061 (discussing equitable discretion separately for the separate compliance and remediation injunction requests)).

Plaintiffs must meet an even higher standard for a mandatory injunction. “[M]andatory injunctive relief is rarely granted absent compelling circumstances.” *Jackson v. Nat’l Football League*, 802 F. Supp. 226, 232 (D. Minn. 1992) (citing *Citizens Concerned for Separation of Church and State v. City and County of Denver*, 628 F.2d 1289, 1299 (10th Cir. 1980)). Mandatory injunctions are more “cautiously viewed and sparingly issued” than prohibitory injunctions, and thus can be justified only upon “the clearest equitable grounds.” *Graham v. Medical Mutual of Ohio*, 130 F.3d 293, 295 (7th Cir. 1997); *see also Ferry-Morse Seed Co. v. Food Corn, Inc.*, 729 F.2d 589, 593 (8th Cir. 1984) (grant of mandatory preliminary injunctions is disfavored unless right to such relief is clearly established); *Fernandez v. Bal Harbour Vill.*, 49 F. Supp. 3d 1144, 1151 (S.D. Fla. 2014) (“[M]andatory injunctions are to be sparingly issued and upon a strong showing of necessity and upon equitable grounds which are clearly apparent.”) (quoting *Fox v. City of W. Palm Beach*, 383 F.2d 189, 194 (5th Cir. 1967)); *Preston v. Bd. of Trustees of Chicago State Univ.*, 120 F. Supp. 3d 801, 805 (N.D. Ill. 2015) (“The difference between a mandatory injunction and a prohibitory injunction lies in the burden the movant must carry to obtain the injunction. [. . . T]he balance of hardships [] takes on heightened importance when the plaintiff requests a mandatory injunction, . . . [which] imposes significant burdens on the defendant and requires careful consideration of the intrusiveness of the ordered act”) (internal quotation, citation omitted). “Generally, courts are more reluctant to grant a mandatory injunction, and the requirements are stricter than for a prohibitory one.” *U.S. v. Westvaco Corp.*, No. CV MJG-00-2602, 2015 WL 10323214, at *6, n.19 (D. Md. Feb. 26, 2015) (New Source Review case).

C. Any Injunction Must Be Narrowly Tailored to Remedy the Violation.

“An injunction must not be ‘broader than necessary to remedy the underlying wrong.’” *Gerlich v. Leath*, 861 F.3d 697, 710 (8th Cir. 2017) (quoting *Coca-Cola Co. v. Purdy*, 382 F.3d

774, 790 (8th Cir. 2004)). “An injunction must be *tailored to remedy specific harm shown*.” *Rogers v. Scurr*, 676 F.2d 1211, 1214 (8th Cir. 1982) (emphasis added); *Lytle v. U.S. Dep’t of Health & Human Servs.*, 612 F. App’x 861, 863 (8th Cir. 2015) (remanding with instructions that the district court reconsider its broad ban on sales of unapproved medical devices and to consider “whether a more narrowly-tailored injunction might be sufficient”); *Easley v. Anheuser-Busch, Inc.*, 758 F.2d 251, 263 (8th Cir. 1985) (holding that “[p]rovisions of an injunction may be set aside if they are broader than necessary to remedy the underlying wrong.”); *E.E.O.C. v. HBE Corp.*, 135 F.3d 543, 558 (8th Cir. 1998) (holding that the provisions of an injunction addressing “speculative future harm” were broader than necessary to remedy immediate harms and reversing the overly broad provisions); *Bonenberger v. St. Louis Metro. Police Dep’t*, No. 4:12CV21 CDP, 2014 WL 1689296, at *1 (E.D. Mo. Apr. 29, 2014) (“An injunction should be tailored to the harm suffered.”).

Injunctive relief should be “no more burdensome to the defendant than necessary to provide complete relief to the plaintiffs.” *Kentuckians for Commonwealth Inc. v. Rivenburgh*, 317 F.3d 425, 436 (4th Cir. 2003) (quoting *Califano v. Yamasaki*, 442 U.S. 682, 702 (1979)) (vacating an injunction on the grounds that it was broader than necessary to provide plaintiffs with complete relief within the geographical area of the alleged harm); *see also Alabama Air Pollution Control Comm’n v. Republic Steel Corp.*, 646 F.2d 210, 214 (5th Cir. 1981) (affirming district court’s refusal to impose sanctions and grant injunctive relief for defendant’s CAA violations because defendant was “continuously trying to improve the level of emissions” and therefore it would be “a travesty of justice to impose sanctions”).

III. Plaintiffs Are Not Entitled to an Injunction Against Labadie.

Plaintiffs seek a mandatory injunction that would require Ameren “to limit the emissions from Labadie going forward.” (Pls.’ Closing, Vol. 6 at 30:3-4.) Plaintiffs do not dispute that

Labadie is lawfully permitted and fully compliant with all applicable laws and regulations. They are not seeking this injunction based on regulatory enforcement to ensure compliance at Labadie. Instead, Plaintiffs seek such an injunction based entirely on equitable principles, claiming that “excess” SO₂ emissions from Rush Island must be mitigated or remediated by mandating SO₂ emission reductions at Labadie going forward. There is no precedent for this type of injunctive relief against a “totally innocent boiler.” *Westvaco*, 2015 WL 10323214, at *12. And there is no support for it in the law, or based on the evidence presented at trial. Plaintiffs have not carried their burden to demonstrate that they are entitled to an injunction against Labadie, and the Court should deny such relief.

A. Summary of Plaintiffs’ Case for an Injunction Against Labadie

Plaintiffs presented their case for an injunction against Labadie just as Ameren predicted they would. (*See Ameren’s Mot. in Limine* #1, ECF #1068, at 2-4.) Plaintiffs purported to show harm through a series of outside expert witnesses conducting a hypothetical exercise taking place in 2011 involving a series of models, assumptions, and uncertain inputs.

First, Dr. Staudt applied a *post hoc* hypothetical scenario in which he assumed that Ameren would have installed wet scrubbers at Rush Island in 2007 and 2010 instead of pursuing other lawfully available and far less expensive compliance options like applying for minor permits. Based on his atypical assumption, he estimated what he and Plaintiffs describe as 160,000 tons of “excess” emissions of SO₂ emitted from Rush Island since 2011. (AFOF ¶ 32.) Dr. Staudt’s assumption is legally flawed because the subsequent operation of Rush Island without a permit, and any alleged failure to comply with a hypothetical set of operational parameters that would have been developed through the permitting process, did not violate the law. *See Otter Tail*, 615 F.3d at 1015, 1016. His assumption is factually flawed because minor permits would have been an available compliance option had Ameren known PSD was triggered,

and there is no dispute that almost all of the “160,000 tons” would have been allowed under such minor permits. (AFOF ¶¶ 38-39.) Despite these flaws, Plaintiffs presented Dr. Staudt’s 160,000 tons of “excess” SO₂ emissions as the foundational assumption upon which their other experts, Mr. Chinkin and Dr. Schwartz, relied. (AFOF ¶ 54.)

Second, Mr. Chinkin plugged Dr. Staudt’s “excess” SO₂ emissions estimate for a single year, 2011, into a computer model called CAMx in order to further estimate how those emissions purportedly interacted with other elements in the atmosphere, dispersed throughout the country, and transformed into a specific type of PM_{2.5}: sulfate. (AFOF ¶¶ 45, 58-60, 69.) Mr. Chinkin conceded that the modeling methodology he employed depends on uncertain inputs and sub-models and attempts to simulate numerous impossible-to-replicate real-world conditions such as cloud formation and sunlight using thousands of mathematical equations. (AFOF ¶¶ 58-63.) His modeling results, therefore, are uncertain. (AFOF ¶ 63.) Indeed, when compared to real-world air quality monitors in the locations where he found his highest modeled impacts, Mr. Chinkin’s modeling results substantially overstated PM_{2.5} concentrations. (AFOF ¶¶ 250-52.)

These uncertainties and overstatements would render the modeling unreliable in any event, but the unreliability is magnified here because Mr. Chinkin’s modeling results turned out to be exceedingly tiny increments—thousandths of a microgram per cubic meter (µg/m³) of sulfate PM_{2.5}—that Mr. Chinkin attributes to Dr. Staudt’s “excess” SO₂ emissions estimate. (AFOF ¶¶ 208-09.) Mr. Chinkin’s tiny modeled increments are orders of magnitude smaller than naturally occurring variations in PM_{2.5} concentrations as determined by EPA through its development of the SIL. (AFOF ¶¶ 64-65, 174-75, 183-187.) Because Mr. Chinkin’s modeling results fall well below the SIL, they do not represent statistically meaningful values and do not represent any real-world change in PM_{2.5} levels. (AFOF ¶¶ 178-94.) Moreover, Mr. Chinkin

agreed that none of the tiny sulfate PM_{2.5} increments that he modeled contributed to any exceedance of the NAAQS, which EPA set at levels that protect public health, including the most sensitive populations, with an adequate margin of safety. (AFOF ¶ 83.) Notwithstanding numerous reasons to discount and disregard Mr. Chinkin's results, Plaintiffs fed the tiny sulfate PM_{2.5} increments from their 2011 modeling to Dr. Schwartz. (AFOF ¶¶ 182, 256-57.)

Third, Dr. Schwartz assumed that *any* increase in PM_{2.5} concentration—no matter how miniscule; no matter that it's just a *model-predicted* change and not a real-world number; no matter the specific type of PM_{2.5} (sulfate is actually innocuous); and no matter the surrounding air quality—is detrimental to public health. (AFOF ¶¶ 83-85.) He assumed that because certain epidemiology studies have suggested that large reductions in PM_{2.5} statistically correlate with improvements in health, even though those studies do not, and cannot, account for all possible confounding causes, only observe statistical associations and do not show causation, and arrive at diverging results, many statistically insignificant. (AFOF ¶¶ 80-85.)

Dr. Schwartz assumed as a rule without limitation that every fractionally small increment of sulfate PM_{2.5} modeled by Mr. Chinkin would automatically and uniformly result in a preset incremental statistical increase risk of premature mortality. (AFOF ¶¶ 83-85.) Dr. Schwartz ignored the facts that Mr. Chinkin's modeling results were smaller than EPA's threshold for meaningfulness—the SIL—and that the areas modeled by Mr. Chinkin actually already satisfied the PM_{2.5} NAAQS level set by EPA to protect health. (*Id.*) Moreover, despite admitting that sulfate is less toxic than other types of PM_{2.5}, Dr. Schwartz ignored this distinction and simply assumed for purposes of his testimony that all types of PM_{2.5} are equally toxic. (AFOF ¶¶ 136-140.)

Dr. Schwartz then proceeded to testify that, based on all of the preceding estimates, assumptions, modeling, and statistical exercises, he could calculate a number of “excess deaths” that purportedly resulted from Dr. Staudt’s “excess” SO₂ emissions estimate. In fact, what Dr. Schwartz did was aggregate his own tiny estimated changes in the probability of premature mortality across large populations, not identifying or even predicting any real-world deaths. (AFOF ¶ 76, 88.) Dr. Schwartz also converted his statistical aggregation of “excess deaths” into dollar values. (AFOF ¶¶ 86-92.) This was the culmination of how Plaintiffs purported to show harm from Rush Island’s emissions they claim needs to be remediated or mitigated.

Finally, Mr. Chinkin and Dr. Schwartz asserted that limiting emissions from Labadie would remediate or mitigate that harm. Their simple logic is that each ton of reduced SO₂ emissions from Labadie will offset, ton-for-ton, the “excess” SO₂ emissions that Dr. Staudt estimated for Rush Island. (AFOF ¶¶ 258-60.)

B. Otter Tail Contradicts the “Excess” Emissions Premise of Plaintiffs’ Theory.

The Eighth Circuit’s *Otter Tail* decision held that “operation of a facility without a permit is not articulated as a basis for a violation” under the applicable provisions of the Clean Air Act and “there is no ongoing duty to obtain PSD permits.” 615 F.3d at 1015, 1017 (internal quotations and ellipses omitted) (quoting *National Parks & Conservation Assoc., Inc. v. TVA*, 502 F.3d 1316, 1323 (11th Cir. 2007)). The Court stated that “while Otter Tail may have violated §52.21(r)(1) by failing to apply for PSD permits in the first place, it does not continue to do so by failing to comply with a hypothetical set of operational parameters that would have been developed through the permitting process.” *Id.* at 1016. The difference between “preconstruction permit violations and operation permit violations is crucial.” *United States v. Southern Indiana Gas and Electric Co.* (“SIGECO”), 2002 WL 1760752, at *4 (S.D. Ind. July 26, 2002). Whereas it is “generally recognized that failure to obtain an operations permit is a

continuing violation for each day of operation without the permit . . . [i]n contrast, failure to obtain a preconstruction permit is a discrete violation that occurs at the time of construction.” *Id.*; see also *United States v. Midwest Generation, LLC*, 694 F. Supp. 2d 999, 1008 (N.D. Ill. 2010) (same).

Although they have cited other language in *Otter Tail*, Plaintiffs have never grappled with the fundamental disconnect between the Eighth Circuit’s holding and their theory. The starting point for Plaintiffs’ theory of harm is the premise that “excess” emissions of SO₂ resulted from the operation of Rush Island after the construction projects that were at issue in the liability phase for which Ameren did not obtain preconstruction permits. That post-construction operation without PSD permits, however, was lawful under *Otter Tail*, and did not violate the applicable regulations, even though such operation did not “comply with a hypothetical set of operational parameters that would have been developed through the permitting process”—*e.g.*, installation of BACT. The “excess” SO₂ emissions were neither illegal nor the result of an unlawful act or legal violation; rather, they resulted from the entirely lawful operation of the plant.

Plaintiffs voluntarily abandoned civil penalties as a remedy in this case. Even if they still had that remedy available to the, however, *Otter Tail* would preclude them from recovering civil penalties day-after-day throughout Rush Island’s post-construction operation, even though Ameren had failed to obtain a PSD permit and even though the plant operated without BACT controls. Under *Otter Tail*, that post-construction operation was not illegal, the emissions resulting from that operation were not illegal, and Plaintiffs’ could not have recovered civil penalties based on that operation and those emissions. The logic and analysis is no different for an injunction. Just as Plaintiffs could not have recovered civil penalties based on post-

construction operation and the resulting emissions, they also cannot obtain a billion dollars' worth of injunctive relief based on that operation and those emissions. By arguing otherwise, Plaintiffs urge the Court to circumvent *Otter Tail*.

In sum, *Otter Tail* forecloses the "excess" emissions premise from which Plaintiffs' theory of harm starts. Because that starting premise is false, Plaintiffs' entire theory fails.

C. Plaintiffs Have Not Established that the *eBay* Factors Support Any Injunction against Labadie.

Although Plaintiffs' theory contradicts and fails under *Otter Tail*, and also separately fails as a matter of law for other reasons, described below and in prior summary judgment briefing (*see* Sections III.D and III.E below, and Ameren's MSJ No. 3 (ECF No. 955)), and therefore consideration under *eBay* is not necessary, the *eBay* test shows that Plaintiffs' theory fails.

1. There Is No Evidence of Harm, Nor Evidence of Irreparable Harm.

Under the first *eBay* factor, Plaintiffs bear the burden of proving irreparable harm caused by Ameren. They have failed to carry that burden. Moreover, as discussed below (*see* Section III(C)(4)), any harm they have established is outweighed by costs to ratepayers and other countervailing factors in balancing the equities.

a. Plaintiffs Presented No Evidence of Actual, Real-World Harm.

Plaintiffs' counsel argued, "[w]e don't have to prove the exact extent of the harm," and Plaintiffs made no effort to do that. (Pls.' Closing, Vol. 6 at 25:16-17.) They presented no evidence of actual harm—no evidence of an actual person dying, getting sick, or otherwise suffering an adverse health impact in the real world. For example, the numbers of deaths Dr. Schwartz discussed did not represent actual deaths of individual people, but rather an aggregation of miniscule estimates of increased risk of dying stretched across entire populations that Dr. Schwartz derived through a modeling exercise based on assumptions and uncertain

inputs such as the results from Mr. Chinkin's air modeling (which also depended on assumptions, uncertain inputs, and sub-models). (AFOF ¶¶ 86-92; AFOF ¶¶ 57-66.) While on direct examination, Dr. Schwartz represented his count as a round number of 137 "excess deaths"—giving an impression that this number reflected 137 real individuals who died. What he was actually referring to, without disclosing how he derived the number and that he had rounded it off, was not actual deaths of 137 individual people, but instead the number reflecting his aggregation of those miniscule estimates of increased risk. (AFOF ¶¶ 86-92.) The actual number from his modeling exercise and aggregation was 136.6338128, not the misleadingly round number 137. (*Id.*)

Similarly, Sierra Club did not present any evidence of any actual real-world health impact. Mr. Melville did not testify to any such real-world health impact, just asserted fears about future health effects. (*See* Melville, Vol. 2B at 111:23-112:24, 116:7-14, 117:10-18.) In fact, prior to trial, in order to avoid providing discovery of medical records and testimony that would expose the presence or absence of any evidence of real-world health impacts, Sierra Club stipulated that it did not intend to present any such evidence at trial. (Ameren Opp. to Sierra Club MSJ, Ex. G (ECF No. 1003-9).)

Relying entirely on historical modeling, extrapolation, and assumptions, and ignoring all uncertainties along the way, to arrive at certain claims of grave actual health harm, as Plaintiffs' experts did here, disregards scientific principles for determining: whether there was any actual exposure by any individual; at what level; through what pathway and biological mechanism; and how and whether that actual exposure would translate to some adverse health impact. "Without some quantitative understanding of the magnitude of exposure, and of the duration of time over which exposure occurs, it becomes difficult to reach meaningful conclusions about health risks."

Federal Judicial Center’s *Reference Manual on Scientific Evidence* (“Reference Manual”) at 509; *see also Wintz By & Through Wintz v. Northrop Corp.*, 110 F.3d 508, 513 (7th Cir. 1997). Dr. Schwartz does not opine on actual real-world harms, not only because his model reveals that he has simply performed a statistical estimate, but also because he performed no toxicological analysis to support a conclusion of actual real-world health impacts to any member of the public. (AFOF ¶¶ 86-89.)

There is “a ‘central tenet’ in the science of the harmful effects of chemical and physical agents on organisms—the dose makes the poison,” *i.e.* ‘all chemical agents are intrinsically hazardous[:] whether they cause harm is only a question of dose.’” *Yates v. Ford Motor Co.*, 113 F. Supp. 3d 841, 850–51 (E.D.N.C. 2015) (excluding expert that did “not reliably establish[] a level at which [the chemical compound at issue] is hazardous, generally, nor ha[d] he reliably compared plaintiff[]’s exposures to levels established as hazardous”) (quoting Reference Manual at 636); *see also Cavallo*, 892 F. Supp. at 772 (excluding expert that was “unaware of the duration and intensity of exposure” and “could cite no studies or published literature to support adverse effects *from that level of exposure* to [the specific substance]”) (emphasis added); *Arias v. DynCorp*, 928 F.Supp.2d 10, 22–23 (D.D.C.2013) (requiring expert relying on extrapolations of high-level exposure studies in a case involving lower-level exposures to “explain his methodology, such as how he extrapolate[d] the risk downward”) (internal quotation omitted).

Plaintiffs failed to present any such evidence of actual exposure, dose, or other real-world evidence of a hazard level to humans’ health, so they cannot arrive at a defensible, let alone certain, claim of real-world harm.

b. Proof Based on Modeling Is Inherently Uncertain.

Plaintiffs base their theory on a series of modeling exercises, as described above.

Because modeling is inherently uncertain, proof based on modeling also is inherently uncertain.

For example, EPA has recognized:

The formulation and application of air quality models are accompanied by several sources of uncertainty. “Irreducible” uncertainty stems from the “unknown” conditions, which may not be explicitly accounted for in the model (*e.g.*, the turbulent velocity field). Thus, there are likely to be deviations from the observed concentrations in individual events due to variations in the unknown conditions. “Reducible” uncertainties are caused by: (1) Uncertainties in the “known” input conditions (*e.g.*, emission characteristics and meteorological data); (2) errors in the measured concentrations; and (3) inadequate model physics and formulation.

(AFOF ¶ 64.) EPA has elaborated on the inherent uncertainties in such modeling:

Even with a perfect model that predicts the correct ensemble average, there are likely to be deviations from the observed concentrations in individual repetitions of the event, due to variations in the unknown conditions. The statistics of these concentration residuals are termed “inherent” uncertainty. Available evidence suggests that this source of uncertainty alone may be responsible for a typical range of variation in concentrations of as much as +/- 50 percent.

(AFOF ¶ 65.)

Courts have similarly recognized that such modeling is “fraught with uncertainty.” *Davis v. U.S. E.P.A.*, 348 F.3d 772, 784 (9th Cir. 2003) (“We recognize that modeling the effects on NO_x, CO, and VOC from an oxygen waiver and predicting the resulting effects on air quality is a complex technical exercise, fraught with uncertainty.”); *see also* José A. Berlanga & Nancy J. Brown, *Establishing Tort Liability with Regulatory Tools? The Utility of Air Modeling As A Surrogate for Monitoring Data*, 3 *Env’tl & Energy L. & Pol’y J.* 1, 29-30 (2008) (“More advanced models include mathematical simulations to estimate the rate at which emissions combine with other substances in the atmosphere, as well as effects caused by photochemical reactions related to sunlight and temperature. In fact, the sheer complexity of these mathematical computations suggests that those looking to air modeling data should proceed with caution,

especially when applying models to ambient individual exposures.”); *see also* Reference Manual at 316, 531-532 (describing uncertainties, sources of error in modeling).

c. **Mr. Chinkin’s Modeling Results Are Uncertain, Overstated, and Unreliable.**

Mr. Chinkin’s modeling of sulfate PM_{2.5} concentrations that he attributed to “excess” Rush Island SO₂ emissions are uncertain, overstated, and unreliable. Mr. Chinkin conceded that his modeling utilized uncertain inputs, such as estimates and outputs from other sub-models, to which the model then applied thousands of mathematical equations in an attempt to simulate things like cloud formation and sunlight. (AFOF ¶¶ 58-63.) He conceded that these uncertain inputs necessarily generated uncertain outputs from the model. (AFOF ¶ 63.) And, in fact, his modeling results substantially overstated PM_{2.5} concentrations compared to the real-world air quality monitors in the areas around Rush Island, the locations of Mr. Chinkin’s highest modeled PM_{2.5} concentration changes. (AFOF ¶¶ 250-52.) These uncertainties and overstatements, on top of the inherent uncertainties of such modeling recognized by EPA and courts, render Mr. Chinkin’s modeling results unreliable. (AFOF ¶¶ 64-65.) As Mr. Morris testified (and Mr. Chinkin did not rebut), “[i]f the model is overpredicting PM_{2.5} by 25 or 30%”—as Mr. Chinkin’s modeling did—it may also overpredict the amount of PM_{2.5} from the Rush Island SO₂ emissions by a similar amount. That could be one ramification of the overestimation bias of Mr. Chinkin’s modeling.” (AFOF ¶¶ 254-55.)

d. **Mr. Chinkin’s Modeling Results Are Tiny Increments, Much Smaller than EPA’s Threshold for Meaningfulness.**

Mr. Chinkin’s modeling results turned out to be tiny increments—thousandths of a microgram per cubic meter of sulfate PM_{2.5}. The average incremental change in PM_{2.5} concentration that Mr. Chinkin modeled and attributed to “excess” Rush Island SO₂ emissions was 0.004 µg/m³. (AFOF ¶ 73.) In his modeling, Mr. Chinkin counted all incremental changes

greater than $0.001 \mu\text{g}/\text{m}^3$. (AFOF ¶ 71.) The highest incremental change in his modeling was $0.057 \mu\text{g}/\text{m}^3$, which was the modeled value for a single 12 kilometer by 12 kilometer grid cell, which happened to be the location of the plant itself. (AFOF ¶ 74.) 92.7% of the grid cells that Mr. Chinkin counted in his modeling, however, had incremental changes of 0.001 to $0.01 \mu\text{g}/\text{m}^3$. (AFOF ¶ 75.) 7.2% of the grid cells had incremental changes of 0.011 to $0.029 \mu\text{g}/\text{m}^3$. (AFOF ¶ 75.) In other words, 99.9% of Mr. Chinkin's modeling reflected incremental changes in $\text{PM}_{2.5}$ concentrations that were less than $0.030 \mu\text{g}/\text{m}^3$. (AFOF ¶ 75.) And the remaining 0.1% of grid cells had incremental changes of 0.030 to $0.057 \mu\text{g}/\text{m}^3$. (AFOF ¶ 75.)

These are tiny modeled increments. The fact that the outputs are miniscule magnifies the importance of the uncertainties and overstatements discussed above. For example, Mr. Chinkin himself testified that there is variability in the measurement of $\text{PM}_{2.5}$ concentrations even between “two monitors next to each other breathing in exactly the same air into the instruments.” (AFOF ¶ 51.) The inherent variability of $\text{PM}_{2.5}$ concentrations is something that EPA has carefully studied through its development of a threshold for statistical meaningfulness, which is called the SIL. (AFOF ¶¶ 178-88.) The relevant SIL for $\text{PM}_{2.5}$ is $0.2 \mu\text{g}/\text{m}^3$. (AFOF ¶¶ 187-88.) Mr. Chinkin's tiny modeled increments are far smaller than the SIL. (*Id.*)

“Consistent with EPA guidance, SILs historically have been used, inter alia: (1) as part of a preliminary, single-source analysis that considers only the impact of the proposed source in the permit application on air quality to determine whether a full (*i.e.*, cumulative) impact analysis is necessary to assess whether the source would cause or contribute to a violation; and (2) as a part of a cumulative impact analysis which also considers the impact of existing sources as well as background concentrations.” Proof Br. of Respondents, at 9 (Mar. 26, 2019) (hereinafter, “EPA SIL Brief”), *Sierra Club v. U.S. EPA*, Case No. 18-1167. (*See also* AFOF ¶¶ 178-88.)

“The fundamental concept behind this approach is that “an anthropogenic perturbation of air quality that is within a specified range may be considered indistinguishable from the inherent variability in the measured atmospheric concentrations and is, from a statistical standpoint, *not significant* at the given confidence level.” (EPA SIL Brief at 15 (citing SIL Memo); AFOF ¶ 185.) In defending the SILs as “reasonable” to another federal court contemporaneous with this litigation, EPA stated that “the PM_{2.5} and ozone SILs may be used as acceptable quantitative criteria to identify the degree of impact on air quality that is a “*significant*” or “*meaningful*” “*impact*”—i.e., “*more than ‘inconsequential’ or ‘negligible’.*” (EPA SIL Brief at 44 (emphasis added).)

EPA interprets a “significant” impact “to identify a degree of change in air quality that is *distinguishable from the inherent variability* in pollutant concentrations and *can thus represent an impact* that causes or contributes to a violation of air quality standards.” (*Id.* at 43-44 (emphasis added).) EPA designed the SILs to “reflect the most representative state of the atmosphere.” (*Id.* at 18 (quoting SIL Memo).) To develop the specific thresholds, “EPA assessed the variability in ambient ozone and PM_{2.5} pollutant concentrations independently. This was determined through analysis of 17 years of monitoring data from the national air quality monitoring network, using the “design value” at each monitor.” (*Id.* at 13; AFOF ¶ 174.) “EPA’s statistical analysis determined . . . the variability associated with the monitor-based [data] . . . to inform the degree of air quality change that can be considered an ‘*insignificant* impact.’” (EPA SIL Brief at 14-15 (citing SIL Memo) (emphasis added); AFOF ¶ 179.)

Moreover, EPA understands that the SILs would be used to evaluate modeling like Mr. Chinkin’s. “Further, EPA reasonably understands that Congress, having directed EPA to develop air quality models, anticipated that those models would be capable of predicting

relatively small increases in air pollutant concentrations and that “there would be a point at which a small projected air quality impact . . . *becomes so inconsequential*. . . .” (*Id.* at 48-49 (emphasis added).) “EPA’s technical analysis . . . would support a conclusion that air quality impacts from the proposed source below the level of the SIL will not be discernable from changes (or lack of changes) [] due to the inherent variability that would otherwise occur—*e.g.*, those induced by weather, existing sources, and upwind contributions—so that any such level of predicted impact from the proposed source may be considered not meaningful.” (*Id.* at 49-50.) “In other words, it is not just that proposed source impacts below the level of the SILs are ‘small,’ but that *they do not meaningfully change an area’s air quality*.” (*Id.* at 53 (emphasis added).) “It is thus reasonable to conclude that a modeled degree of change that is within the range of the inherent variability in the baseline conditions is not meaningful.” (*Id.* at 54.)

This reasoning and analysis are precisely consonant with how this Court should evaluate and contextualize Plaintiffs’ air modeling “impacts,” as model predictions that are “not meaningful,” just as courts have done before. (*Id.* at 54.) For example, in *Groce v. Dep’t of Env’tl. Prot.*, 921 A.2d 567 (Pa. Commw. Ct. 2007), a dispute over the planned construction of an electric generating power plant, a Pennsylvania appellate court affirmed the state agency’s and administrative hearing board’s determinations that the plant’s SO₂ emissions were “*de minimis* because the 24-hour SIL for SO₂ was 0.2 micrograms per cubic meter, and on an occasion when the modeling showed an increment violation [], the [f]acility’s contribution was 0.02 micrograms per cubic meter which was an extremely small reading.” *Id.* at 577. The appellate court concluded that “Congress did not intend to prohibit any and all economic growth based on infinitesimally small values calculated using highly developed and developing software.” *Id.* at 578 (referring to air modeling software like CAMx). It also reiterated the administrative board’s

rejections of the petitioners' arguments for a "non-zero" approach, meaning that *any* modeled air "impact" should matter:

[A]dopting the [petitioners'] non-zero approach would be impracticable, particularly as new software develops that allows modelers to measure even smaller amounts at greater distances. As [the agency] correctly points out, *the [petitioners'] approach would depend solely on what measurement, no matter how small, is generated by a computer model and not whether a proposed source's impact has any significance to air quality*. Simply stated, merely because a computer model can generate a number does not necessarily make it significant in our analysis.

The fact that the air dispersion model is capable of calculating infinitesimally small values does not mean that those values are meaningful outside the realm of pure mathematics. In fact, the Class I 24-hour [SIL] for [SO₂] is actually below the detection limit for ambient monitors used in the field. [] *The models have predicted something that cannot be verified or even detected reliably.* We agree with [the agency] that there has to be some common sense threshold to make mathematical modeling methods realistic and meaningful.

Id. at 577–78 (internal citations omitted, emphases added). And in *Groce*, the level of impact that the court affirmed was *de minimis*, infinitesimally small, and not capable of being verified or detected reliably was *twenty (20) times larger* than the level that Mr. Chinkin has urged is "significant" and "physically connected" to Rush Island here. (AFOF ¶¶ 220, 222.)

By EPA's own standards, the impacts from Rush Island emissions were inconsequential or negligible. For an injunction to issue, the injury established must be greater than *de minimis*. *Ala. Power Co. v. E.P.A.*, 636 F.2d 323, 360 (D.C. Cir. 1980) ("It is commonplace, of course, that the law does not concern itself with trifling matters, and this principle has often found application in the administrative context."); *see also Knapp-Monarch Co. v. Casco Prods. Corp.*,

342 F.2d 622, 627 (7th Cir. 1965) (injunctive relief is inappropriate where the injury is *de minimis*). No injunctive relief is available absent irreparable harm, and an impact that EPA considers insignificant and negligible does not satisfy the harm requirement for any injunction.

e. **All of Mr. Chinkin's Modeled Impacts Occurred in Areas Where Air Quality Attains the Health-Protective NAAQS.**

The NAAQS are “the engine that drives nearly all of Title I of the CAA,” including the PSD program. *Whitman v. Am. Trucking Ass'n*s, 531 U.S. 457, 468 (2001). Defending its decision to set the PM_{2.5} NAAQS at 12.0 µg/m³ before the D.C. Circuit, EPA explained the importance of the NAAQS standard as follows:

“Primary” NAAQS are air quality standards “which in the judgment of the Administrator . . . are requisite to protect the public health,” with “an adequate margin of safety.” 42 U.S.C. § 7409(b)(1). EPA must set primary NAAQS based solely on public health considerations, without reference to the cost or feasibility of achieving the standards. *Whitman* The “public health” that EPA must protect includes not only the health of average individuals, but also that of sensitive populations (such as children or the elderly) who may be particularly vulnerable to air pollution. *Am. Lung Ass'n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998).

(Jan. 17, 2014 Brief of EPA, at 3-4, *Nat'l Ass'n of Mfrs. v. EPA*, No. 13-1069 (D.C. Cir.).)

EPA went on: “In exercising judgment to revise the annual standard level, the Administrator was able to draw upon a broad array of scientific information and recommendations, including the recommendations of CASAC [the Clean Air Science Advisory Committee], and the peer-reviewed scientific and policy assessments prepared by EPA staff, as well as public comments.” (*Id.* at 24.) After considering and rejecting both a higher standard of 13.0 µg/m³ and a lower standard of 11.0 µg/m³, “the Administrator reasonably concluded that a level of 12.0 µg/m³ is needed to provide requisite public health protection.” (*Id.* at 25-26.) “The Administrator’s decision to revise the standard level to 12.0 µg/m³ is [] fully in accord with the unanimous and explicit recommendations of the independent expert scientific review panel,”

which “advised that an annual standard within a range of 11 to 13 $\mu\text{g}/\text{m}^3$ is supported by the scientific evidence.” (*Id.* at 27.) “The Administrator’s decision is additionally consistent with the conclusions of her own scientific staff,” which “concluded that it was appropriate for the Administrator to consider revising the level to within the range of 11 to 13 $\mu\text{g}/\text{m}^3$, with the evidence most strongly supporting a level of 11 to 12 $\mu\text{g}/\text{m}^3$.” (*Id.* at 27-28; *see also* AFOF ¶¶ 98-100.)

In sum, EPA set the NAAQS for $\text{PM}_{2.5}$ at a level that protects the human health of the most sensitive and at-risk populations, with an adequate margin of safety, based on the best science, and without any consideration of costs or economic impacts. (*See also* Ameren’s Mot. *in Limine* No. 1 (ECF #1068) at 4-6 (citing additional authorities).)

Consistent with what EPA has said, Mr. Chinkin has testified before another federal court—the Northern District of California—that the $\text{PM}_{2.5}$ NAAQS are designed to protect the public from air pollution and set at levels that provide a margin of safety. (AFOF ¶ 96.) Mr. Chinkin has looked at sources $\text{PM}_{2.5}$ contributions to background concentrations and then compared that combined concentration level to a threshold, commonly using the NAAQS as the relevant threshold of comparison. (AFOF ¶ 36.) Mr. Chinkin performed this type of comparison to the NAAQS in the opinions he offered to the Northern District of California. He modeled a source’s contribution of $\text{PM}_{2.5}$ to background concentrations in downwind residential areas and opined that a source’s contribution of 0.1 $\mu\text{g}/\text{m}^3$ was a “very small” impact that did not affect an exceedance of the NAAQS. (AFOF ¶¶ 196-198.)

Mr. Chinkin did not perform a comparison to the NAAQS in this case because, despite having testified to another District Court that the $\text{PM}_{2.5}$ NAAQS protects public health and despite performing such a comparison before that Court, he did not consider that to be “what this

case is about” because this “really wasn’t a NAAQS situation.” (AFOF ¶ 36.) Mr. Chinkin testified on redirect that performing such a comparison here “would [not] even make sense” because “there weren’t any NAAQS [nonattainment] areas to violate” given the undisputed fact that there are not any areas downwind of Rush Island that are not attaining the health-protective level set by EPA in the PM_{2.5} NAAQS. (AFOF ¶ 28.) All of Mr. Chinkin’s modeled impacts occurred in areas where air quality already attains the health-protective NAAQS. Because he would not have been able to show that his modeling of Rush Island’s PM_{2.5} contributions resulted in any exceedance of the NAAQS—especially given the tiny increments his modeling generated—Mr. Chinkin decided not to perform a NAAQS comparison here. Although he tried to explain away a NAAQS comparison as relating only to permitting proceedings, but not to after-the-fact “excess” emissions, that attempted distinction is belied by Mr. Chinkin’s own expert work in prior NSR enforcement action cases in which he evaluated sources’ PM_{2.5} contributions in the context of the NAAQS and opined on non-attainment of the NAAQS. (*See, e.g., United States v. Cinergy*, 618 F. Supp. 2d 942, 951 (S.D. Ind. 2009) (“Chinkin selected June 2002 to model because there were a number of days in that month when air quality exceeded the National Ambient Air Quality Standard [] for PM_{2.5} and ozone.”); *id.* at 963 (discussing Mr. Chinkin’s testimony in discussion of the NAAQS and non-attainment).)

Mr. Chinkin did not perform a NAAQS comparison here because Plaintiffs knew it would doom their theory of harm. The evidence at trial showed that in every area where Plaintiffs theorized that harm occurred, the air quality is actually better than the standard that EPA set to protect public health, including the most sensitive populations, with an adequate margin of safety. Even ignoring all of the uncertainties and overstatements in Mr. Chinkin’s modeling and accepting it for the sake of argument, his modeling results did not show that Rush

Island emissions affected non-attainment of EPA's health-protective standard in any area, period. This is yet another reason why Plaintiffs have failed to carry their burden to prove harm.

f. Dr. Schwartz's "No Threshold" Assertion Is Misleading.

Recognizing the problem the NAAQS present for their theory, Plaintiffs argue, based on testimony from Dr. Schwartz, that PM_{2.5} is a "no threshold" pollutant for which there is no known level that is free of risk. Of course, that assertion is contradicted by the NAAQS itself, which, by definition, is a threshold set by EPA to protect health. (AFOF ¶ 96.) Moreover, there are semantic gymnastics at play here. When Dr. Schwartz says there is "no threshold," he means there is no way to determine a population-level threshold that applies in the same way to every individual person because each individual has his or her own unique biological threshold for PM_{2.5}. (AFOF ¶ 106.) EPA also confirms that this is what is meant by "no threshold" in the context of PM_{2.5}. "EPA recognizes that there likely are individual biological thresholds for specific health responses," even though there remains uncertainty regarding a population-level threshold that applies uniformly to everyone. (*Id.*) In addition, with respect to a population-level threshold, EPA recognizes that, "[w]hile epidemiological analyses have not identified a population threshold in the range of air quality concentrations evaluated in these studies, the EPA recognizes that it is possible that such thresholds exist towards the lower end of these ranges (or below these ranges)." (*Id.*) In fact, as Dr. Valberg testified (and Dr. Schwartz did not rebut), "epidemiological studies are not capable of identifying the threshold if it's there." (*Id.*)

g. Dr. Schwartz's Use of Statistical Associations in Epidemiological Studies Does Not Prove Causation of Actual Harm.

Statistical association "is not scientifically valid proof of causation." *See, e.g., Glastetter v. Novartis Pharm. Corp.*, 252 F.3d 986, 989–90 (8th Cir. 2001) (affirming District Court's order excluding expert evidence relying on case studies to argue causation between a pharmaceutical

drug and vasoconstriction because “[c]ase reports make little attempt to screen out alternative causes They frequently lack analysis. . . . Hence, [c]ausal attribution based on case studies must be regarded with caution.”); *see also* Reference Manual at 552 (“[I]t should be emphasized that *an association is not equivalent to causation.*”) (emphasis in original). “An association identified in an epidemiologic study may or may not be causal. Assessing whether an association is causal requires an understanding of the strengths and weaknesses of the study’s design and implementation, as well as a judgment about how the study findings fit with other scientific knowledge. It is important to emphasize that all studies have . . . limitations that add uncertainty about the proper interpretation of the results.” *Id.* at 552-53. While this scientific flaw may not have warranted wholesale exclusion of the expert opinion testimony under Federal Rule of Evidence 702 or *Daubert*, Plaintiffs cannot satisfy their burden to prove harm by a mere theory of association equaling causation. That is not enough under the law.

Plaintiffs’ experts’ harm opinions also do not screen out confounding causes, and the epidemiological studies relied on cannot screen out or control for all confounders. *See Reference Manual* at 512, n. 22 (reference guide on exposure science and importance of “carefully address[ing]” confounding factors) (AFOF ¶¶ 81-82.)

h. Plaintiffs Failed to Prove Any Harm Related to the Only Type of PM_{2.5} at Issue: Sulfate.

It is established that PM_{2.5} is comprised of various chemical components and that sulfate is the only one of those components at issue in this case, because, as the parties’ respective experts agree, Rush Island’s SO₂ emissions can only contribute to the formation of sulfate. (AFOF ¶¶ 41-44, 141-44.) Plaintiffs failed to prove that the modeled contribution of Rush Island’s SO₂ emissions to the formation of sulfate caused any harm for the following three

independent reasons. That is a complete failure of proof on irreparable harm, which Plaintiffs bear the burden of proving.

First, Plaintiffs failed to do any analysis or quantification of the very—and only—harm they claimed sulfates caused in this case. Plaintiffs’ entire claim of irreparable harm rests solely on Dr. Schwartz’s testimony that sulfates can make insoluble metals soluble. (AFOF ¶¶ 145-48.) But when asked at trial what evidence he had of Rush Island’s emissions making metals soluble, his admission could not have been clearer:

Q. Okay. So the answer is you have no quantification of the amount of soluble metals that were caused by SO₂ emissions, right?

A. Correct.

(AFOF ¶¶ 149-50.) Therefore, there is zero evidence in the record that Rush Island’s SO₂ emissions caused any quantity of metals to become soluble.

Second, Plaintiffs failed to offer any evidence to explain what level of soluble metal would cause human health effects through inhalation. While Dr. Schwartz never said so directly, his claim that PM_{2.5} is toxic at any level implies that he also believes that soluble metals are toxic at any level. But that position is contrary to EPA’s own scientist, Dr. James Samet, who testified that “[c]ertain metal ions *in high concentrations* can induce cellular effects.” (AFOF ¶¶ 146-47.) Dr. Samet’s testimony makes sense, because the appropriate level of iron — the very example of metal used by Dr. Schwartz—is actually essential for life. (AFOF ¶ 163-64.) Dr. Valberg, an expert in human physiology and inhalation toxicology, explained that the body quickly and efficiently regulates levels of iron in the body, and a person’s iron level would never be increased — let alone increased to toxic “high concentrations”—by inhaling soluble iron in the air. (AFOF ¶¶ 163-65.) As Dr. Valberg testified, daily vitamin supplements contain tens of thousands of times more soluble iron than could ever theoretically be inhaled and absorbed from

the air. (AFOF ¶¶ 157-162.) Plaintiffs bear the burden of proof in establishing what level of soluble metal in the body would cause harm; they offered no evidence on such levels, and Dr. Valberg's testimony regarding metal solubility and safe levels of iron in the body was completely un rebutted at trial.

Third, Plaintiffs want the Court to ignore their failure of proof regarding sulfate and treat all chemical components of PM_{2.5} as equally toxic. However, Dr. Schwartz never claimed that the chemical components are actually equally toxic, nor have Plaintiffs made that claim. (AFOF ¶ 136.) Rather, Dr. Schwartz admittedly *assumed* equal toxicity, *based on a lack of evidence*, when conducting his analysis of harm for this case. (AFOF ¶¶ 84, 134-35.) But the evidence at trial, including testimony from Dr. Schwartz regarding his own studies, showed that sulfate is far less toxic than other components of PM_{2.5}. (AFOF ¶¶ 137-40.) Plaintiffs' fallback position is that sulfate should be treated as equally toxic to all other components of PM_{2.5}, because EPA regulates PM_{2.5} by mass and organizations like the World Health Organization do not differentiate between the various chemical components due to a lack of evidence. But how EPA currently regulates PM_{2.5} or the World Health Organization currently views PM_{2.5} based on uncertainty is not evidence sufficient in a court of law that the various chemical components are in fact equally toxic. These positions are irrelevant to the burden EPA carries as a litigant to prove irreparable harm by sulfate, which is the only component of PM_{2.5} at issue in this case.

i. There Is No Ongoing or Future Harm to Mitigate or Remediate.

There is no continuing harm for a remedial injunction to mitigate. Even if Plaintiffs had proved some impact or injury attributable to the historical "excess emissions" from Rush Island, Plaintiffs have not established that an injunction today would have the effect of preventing or mitigating any *future* or *continuing* harm. Plaintiffs have only modeled alleged harm occurring in 2011, which was the highest year of SO₂ emissions from Rush Island.

Plaintiffs have not provided the Court with evidence of a current harm in 2019, let alone evidence of future harms, in 2026 or beyond, when any requested injunctive relief would occur. Because “[t]he purpose of an injunction is to prevent *future* violations,” based on the “necessary determination [] that there exists some cognizable danger of recurrent violation,” *United States v. W. T. Grant Co.*, 345 U.S. 629, 633 (1953) (emphasis added), the irreparable harm requirement “cannot be met where there is no showing of any real or immediate threat that the plaintiff will be wronged again” if the injunction does not issue. *City of Los Angeles v. Lyons*, 461 U.S. 95, 111 (1983). “[I]t is the plaintiff’s burden, in a lawsuit brought to force compliance, to establish standing by demonstrating that, if unchecked by the litigation, the defendant’s allegedly wrongful behavior will likely occur or continue and that the threatened injury is certainly impending.” *Peterson v. Madson*, No. 2:17-CV-04058-NKL, 2017 WL 6733969, at *4 (W.D. Mo. Dec. 29, 2017), *aff’d*, No. 18-1223, 2018 WL 3642224 (8th Cir. Feb. 20, 2018) (quoting *Friends of the Earth, Inc. v. Laidlaw Env’tl. Servs. (TOC), Inc.*, 528 U.S. 167, 170 (2000)); see *Buckley v. Ray*, 848 F.3d 855, 867 n.10 (8th Cir. 2017), *cert. denied*, 137 S. Ct. 2314 (2017) (quoting *Clapper v. Amnesty Int’l USA*, 133 S.Ct. 1138, 1147 (2013)) (noting that, to have standing to seek injunctive relief, the “threatened injury must be *certainly impending* to constitute injury in fact” and determining that the plaintiff had not shown the “likelihood of repetition” of alleged racial bias to have standing to seek injunctive relief).

2. To the Extent Plaintiffs Proved Any Harm, It Has Already Been Mitigated or Remediated by Ameren’s Substantial SO₂ Reductions.

If the Court accepts Plaintiffs’ experts’ theory that any reduction in SO₂ corresponds to a reduction in PM_{2.5}, then Ameren has already reduced PM_{2.5} by a far greater amount than Plaintiffs allege to be the “excess” emissions.

a. Plaintiffs' Ton-for-Ton Logic

The remediation or mitigation theory advanced by Plaintiffs is that SO₂ emissions reductions at Ameren's other plants "offset," "ton for ton," Rush Island's "excess" SO₂ emissions. "[A]s an air quality matter, a ton of SO₂ emissions avoided from" another power plant "will directly compensate for a ton of excess emissions from the Rush Island Plant." (AFOF ¶ 259.) Plaintiffs emphasize the need for "a tight geographic nexus between the harm caused by Rush Island and the areas that would benefit from offsetting reductions," though they disregard any need for an equally "tight temporal nexus," given that populations move and otherwise change over time. (*Id.*) Mr. Chinkin testified that "a ton of SO₂ emissions avoided at Labadie from an air quality perspective is the same as a ton of SO₂ emissions reduced at Rush Island," and "is the same benefit as the harm or the exposure was from a ton of emissions from Rush Island." (AFOF ¶ 260.) According to what Mr. Chinkin called "a linear scaling effect," "when you have SO₂ emissions reductions because [they say] it's linear, you're going to have reductions in PM_{2.5}" that are "ton per ton." (*Id.*)

b. Ameren's SO₂ Emissions Reductions

Although Plaintiffs argue that "many of Rush Island's contemporaries did install FGDs to control their [SO₂] emissions," Ameren installed scrubbers at Sioux. The scrubbers at Sioux went into operation in 2010. CSAPR, the impetus for Ameren's installation of the scrubbers at Sioux, took effect January 1, 2015. As a result, Ameren installed the scrubbers at Sioux several years before any legal requirement obligated Ameren to do so. (AFOF ¶ 261.)

Ameren took other actions to further reduce SO₂ emissions: Ameren also switched to burning ultra-low sulfur fuel starting in 2012, and in 2016, it began operating two of its Meramec units as gas-fired units instead of coal-fired. As a result of installing the scrubbers at Sioux several years early and taking these other actions, Ameren has substantially reduced its SO₂

emissions over the last ten years. Specifically, Ameren has reduced its annual SO₂ emissions by over 100,000 tons since 2009. (AFOF ¶¶ 264, 271.)

c. Ameren’s Emissions Reductions Offset the “Excess” Emissions.

Dr. Staudt’s “excess” emissions estimate covers a multi-year period after 2007. For purposes of comparison, during the five-year period before that (2003 – 2007), the average annual SO₂ emissions from Ameren’s coal-fired fleet was 149,704 tons per year. Ameren’s reductions of SO₂ emissions from that 2003 – 2007 annual average amount for each year after 2007 are reflected below, as well as the cumulative SO₂ reductions that accrued over those years from 2008 to 2018:

Coal-Fired Fleet			
Year	SO₂ Emissions (tons)	SO₂ Reductions from 2003 – 2007 (tons)	Cumulative SO₂ Reductions (tons)
2008	156,478	-6,774	-6,774
2009	153,307	-3,603	-10,377
2010	150,267	-563	-10,940
2011	106,158	43,545	32,605
2012	74,848	74,855	107,460
2013	66,732	82,971	190,432
2014	63,722	85,982	276,414
2015	61,231	88,472	364,887
2016	56,015	93,688	458,575
2017	60,898	88,805	547,380
2018	57,810	91,893	639,274

(See AFOF ¶ 15.)

Compared to Dr. Staudt’s estimate of 162,082 tons of “excess” SO₂ emissions from Rush Island through 2016, over the years 2008 through 2016 Ameren reduced SO₂ emissions by 458,575 tons. Compared to Dr. Staudt’s estimate of “about 275,000 tons” of “excess” SO₂ emissions from Rush Island through 2023, Ameren had already reduced SO₂ emissions by more than that amount—by 276,414 tons—over the years 2008 through 2014. Ameren made all of those SO₂ emissions reductions prior to January 1, 2015, when CSAPR took effect. (AFOF ¶ 7.)

3. **Any Injunction against Labadie Would Not Be Narrowly Tailored to the Alleged Harm.**

Any injunction must be narrowly tailored to remedy a specific violation. *See Swann v. Charlotte-Mecklenburg Bd. of Educ.*, 402 U.S. 1, 16 (1971) (in “any equity case, the nature of the violation determines the scope of the remedy”). The “‘principle that the nature and scope of the remedy are to be determined by the violation means simply that federal-court decrees must directly address and relate to the . . . violation itself.’” *Missouri v. Jenkins*, 515 U.S. 70, 88 (1995) (quoting *Milliken v. Bradley*, 433 U.S. 267, 281-82 (1977)); *see also Lewis v. Casey*, 518 U.S. 343, 357 (1996). Thus, “[a] remedy is justifiable only insofar as it advances the ultimate objective of alleviating the initial . . . violation.” *Freeman v. Pitts*, 503 U.S. 467, 489 (1992). *See also United States v. Holtzman*, 762 F.2d 720, 726 (9th Cir. 1985) (vacating permanent prohibitory injunction in Clean Air Act case and finding district court abused its discretion in issuing a “prospectively inequitable” injunction with no end date, and noting that federal courts’ “power [to enjoin otherwise lawful activity] is not often necessary or appropriate, and is therefore infrequently exercised”) (cited in Pls.’ Opp. to Ameren MSJ No. 3, ECF #988, at 7).

An injunction against Labadie would not be tied to the harm caused by a preconstruction permit violation at Rush Island. *See Jenkins*, 515 U.S. at 98; *Dayton Bd. of Educ. v. Brinkman*, 433 U.S. 406, 420 (1977) (particular equitable remedy is justifiable only to the extent it is “tailor[ed] . . . to fit the nature and extent” of the violation, and “only if there has been a system wide impact may there be a system wide remedy”); *Califano v. Yamasaki*, 442 U.S. 682, 702 (1979) (“the scope of injunctive relief is dictated by the extent of the violation established”); *Atl. States Legal Found., Inc. v. Simco Leather Corp.*, 755 F. Supp. 59, 60 (N.D.N.Y. 1991) (government opposed a consent decree by arguing there was “no nexus between the harm caused by [the] violations” and requested relief).

The injunction against Labadie actually would put Plaintiffs in a better place than if there had never been any PSD violation at Rush Island: Plaintiff-Intervenor Sierra Club has been unsuccessfully trying to force scrubber installation at Labadie through the administrative process, and seeks to circumvent that administrative process through this case. (Ameren MSJ No. 3, Exs. D-I (ECF Nos. 957-3-957-8; *see, e.g., Mort v. United States*, 86 F.3d 890, 895 (9th Cir. 1996) (an equitable remedy is not narrowly tailored if it leaves a plaintiff in a better position than it would have been absent a violation.) They should not be permitted to obtain relief through this Court that is the subject of their ongoing and repeated attempts to secure that precise remedy through administrative channels involving both MDNR and EPA.

An injunction that goes beyond what is necessary to remediate the purported harm has been found to constitute an abuse of discretion. *See Nat. Res. Def. Council, Inc. v. Winter*, 508 F.3d 885, 886 (9th Cir. 2007) (holding that “[i]njunctive relief must be tailored to remedy the specific harm alleged, and an overbroad preliminary injunction is an abuse of discretion”); *Lytle*, 612 F. App’x at 863 (remanding action to district court with instructions to consider “whether a more narrowly-tailored injunction might be sufficient.”) In *Kennedy Building Associates v. Viacom, Inc.*, 375 F.3d 731 (8th Cir. 2004), the Eighth Circuit ordered that an environmental mitigation injunction be remanded and modified with respect to remediating environmental contamination on a property under the Minnesota Environmental Rights Act (MERA) because the injunction exceeded the scope of relief authorized by that statute. *Id.* at 748-49. “The injunction must be redrawn to order only the relief authorized by MERA, that is, the prevention of ongoing releases . . . into soil and groundwater.” *Id.*

Plaintiffs presented no argument or evidence as to how controls against Labadie would be narrowly tailored, because such controls, once installed, are likely permanent. (AFOF ¶¶ 299-

303.) Thus Plaintiffs would be enriched, and Ameren and its rate payers would be penalized, because the so-called “mitigation” remedy would “mitigate” far more than Plaintiffs ever claimed as “excess” SO₂ emissions.

4. The Balance of Equities Disfavors an Injunction against Labadie.

Plaintiffs have not carried their burden to prove harm. But even if they had done so, any harm would be outweighed by the oversized costs to ratepayers and other countervailing factors in balancing the equities.

a. Costs of Control Equipment Will Be Born by Rate Payers.

In contrast with the uncertain harm discussed above, there is no dispute that the costs of the injunction Plaintiffs seek are concrete and certain. Those certain real-world costs far outweigh the benefits of mitigating or remediating harm that is entirely uncertain and unproven. Costs of installing pollution controls translate to higher customer rates because the costs of controls, such as scrubbers or DSI at Labadie “would be passed on to the customers of Ameren Missouri through [] rates.” (AFOF ¶ 288.) Those costs would start to show up in higher rates for Ameren’s customers at the time the pollution controls would go into service, several years in the future. (AFOF ¶ 289.) Ameren customers would face those rate increases every year thereafter through the economic life of the controls or until the Labadie plant retired. (AFOF ¶ 290.)

If the Court orders FGD to be installed at Labadie, the overall cost to Ameren’s customers would be *\$4.3 billion*, \$215 million each year, resulting in a 171 percent cost increase to customers, and an approximate average increased cost of \$3,554 per customer. (AFOF ¶¶ 294-295.) If the Court orders DSI to be installed at Labadie, the overall cost to Ameren’s customers would be *\$1.6 billion*, \$71 million each year, resulting in a 65 percent cost increase to customers, and an approximate average increased cost of \$1,345 per customer. (AFOF ¶¶ 297-

98, 311-25.) There is no dispute that customer rate increases for any pollution controls ordered against the Labadie plant would be added on top of the “higher cost imposed on customers by [any] Rush Island controls.” (AFOF ¶ 291.)

The combined impact of both the cost of FGD at Rush Island and the cost of FGD at Labadie would result in an overall cost to Ameren’s customers would be *\$6.8 billion*, \$340 million each year, and an approximate average increased cost of \$5,630 per customer. (AFOF ¶ 296.) The combined impact of both the cost of FGD at Rush Island and the cost of DSI at Labadie would result in an overall cost to Ameren’s customers would be *\$4.1 billion*, \$196 million each year, and an approximate average increased cost of \$3,422 per customer. (AFOF ¶ 297.) These costs are certain, extraordinarily high, and undisputed, since Plaintiffs’ expert did not perform a rate impact analysis for Labadie controls. (AFOF ¶ 292.)

Controls at Rush Island and Labadie			
Cumulative Cost to Customers Through Revenue Requirement			
	Average Annual Cost to Customers	Overall Cost to Customers	Per-Customer Cost
Rush Island FGD on 2 Units	\$125,500,000	\$2,509,800,000	\$2,077
Labadie FGD on 4 Units	\$214,700,000	\$4,294,100,000	\$3,554
Labadie DSI on 4 Units	\$70,700,000	\$1,625,300,000	\$1,345
Both Plants Combined	\$196,200,000 to \$340,200,000	\$4,135,100,000 to \$6,803,900,000	\$3,422 to \$5,630

Note: Sums of columns may not always match totals, due to rounding.

Source: Slides 15 and 22; Celebi Report pp. 31-33 & Fig. 17; Celebi_EXP_0000023 (Fig 16, 17, 18, 28 - RevReq & Rate Impact Model_FINAL.xlsx)

b. Costs and Other Ramifications of an Emissions Cap at Labadie

In closing argument, Plaintiffs asked the Court to order that emissions from the Labadie plant be capped at 18,000 tons per year. (Pls.’ Closing, Vol. 6 at 30:3-4.) But Plaintiffs offered no evidence supporting this request, and did not even acknowledge or attempt to deal with the fundamental questions of implementation of such a remedy.

First, regardless of the emissions cap, how long will the cap remain in effect? One answer might be “until the excess emissions are fully mitigated,” but Plaintiffs failed to make a proposal for how that would be quantified. Numerous variables bear on the amount of SO₂ Labadie would have emitted if not for the putative cap. Chief among these variables is the sulfur content of the fuel and the level of generation. Plaintiffs have keyed their demand to recent emissions at Labadie, asserting the proposed cap represents approximately 50% of 2018 emissions. But recent emissions have been driven down by Labadie’s use of ultra-low sulfur fuel beginning in 2012. (AFOF ¶¶ 3, 11-12.) Keying the cap to the emission reductions already achieved by switching to that ultra-low sulfur fuel in effect penalizes Ameren for switching to that fuel, which is poor public policy and not an equitable result. If, for example, the cap were set at 50% of Labadie’s emissions in 2007 and 2010—the time of the Rush Island Projects—the cap would be approximately 31,500 tons per year.

Second, setting a cap at 18,000 tons per year would, in effect, force Labadie to continue to burn that ultra-low-sulfur fuel for many years into the future. That fuel comes from a single mine in Wyoming. With a court order in place that effectively requires that specific fuel to be used, Ameren will be at the competitive mercy of that supplier, as well as the railroads that deliver coal from that mine. Ameren is not obligated by any air quality regulations to burn that coal; ordering such a cap would be a further penalty that would act to restrict Ameren’s operational flexibility at an innocent plant. (AFOF ¶¶ 309-10.)

Third, Plaintiffs represented that it does not matter to them how Ameren complies with the cap. If the cap is achieved in whole or in part through operational limitations (running the units half as much to stay below the cap), how will the parties and the Court determine the operations that the units would have achieved if the cap had not been in place? The independent system operator, MISO, would dispatch the Labadie units up to the cap-constrained level that Ameren would bid them into the market; it would be impossible to know the but-for-constraint level of dispatch, so it would be impossible to know how many tons of emissions were reduced at any given unit during any given period of time. This is a significant problem with implementation.

Fourth, Plaintiffs made absolutely no showing to support the level of the cap they proposed. Why 18,000 tons per year and not a different arbitrary number? If the goal is mitigation and not punishment, and Missouri air quality is already excellent, why should the cap not be set at 30,000 tons per year? Emissions would be reduced below current levels, but ratepayers would be burdened far less.

Finally, if controls were used to meet any emissions cap, Plaintiffs have never answered the question of what happens to those controls once mitigation is complete. As Plaintiffs' controls expert Dr. Staudt admitted at trial, it will cost over \$100 million each year to run scrubbers at Labadie, **after** the mitigation is fully completed. (AFOF ¶¶ 302-303.) If the controls are not run, but instead are immediately retired, that too will impose a large stranded capital cost on Ameren and Missouri ratepayers, almost certainly in the nine-figure range. (AFOF ¶ 325.) Plaintiffs have failed to acknowledge or address any of these large costs in argument, and they failed to present evidence on these fundamental, practical issues of how the mandatory injunction they request would be implemented.

For all of these reasons, and those discussed above in subsections III.B and III.C, Plaintiffs' request for a cap should be rejected. If the Court chooses to impose a cap, Ameren proposes a cap of 30,000 tons per year, which reduces emissions substantially but does not eliminate Ameren's ability to burn different fuels at Labadie, otherwise preserves operational flexibility, and does not overly burden ratepayers.

D. An Injunction against Labadie Would Be a Penalty.

As this Court ruled in granting the United States' motion to strike the jury demand before the liability trial, "[w]hen relief 'goes beyond remedying the damage caused to the harmed parties by the defendant's action,' [] it is properly viewed as punitive and therefore legal in nature." *U.S. v. Ameren Missouri*, No. 4:11 CV 77 RWS, 2016 WL 468557, at *1 (E.D. Mo. Feb. 8, 2016) (quoting *Johnson v. S.E.C.*, 87 F.3d 484, 488 (D.C. Cir. 1996)). Recent U.S. Supreme Court precedent confirms that injunctive relief targeting Labadie as a requested form of "remediation" constitutes an impermissible penalty.

In *Kokesh v. S.E.C.*, a unanimous Supreme Court held that the 5-year statute of limitations for any "action, suit or proceeding for the enforcement of any civil fine, penalty, or forfeiture, pecuniary or otherwise" (28 U.S.C. § 2462) applied to an action for disgorgement by the SEC because disgorgement was a "penalty." 137 S. Ct. at 1639. The Supreme Court set out "two principles" of why a remedy such as disgorgement constitutes a penalty. "First, whether a sanction represents a penalty turns in part on whether the wrong sought to be redressed is a wrong to the public, or a wrong to the individual. . . . Penal laws, strictly and properly, are those imposing punishment for an offense committed against the State." *Id.* at 1642 (internal citations and quotations omitted). Second, a sanction is a penalty if it "is sought 'for the purpose of punishment, and to deter others from offending in like manner—as opposed to compensating a victim for his loss.'" *Id.* (internal citation and quotation omitted) (emphasis added). The Supreme

Court rejected the SEC’s arguments that the remedy it sought was merely “remedial” in that it “lessen[ed] the effects of a violation” by “restor[ing] the status quo,” noting on the contrary that disgorgement “sometimes . . . does not simply restore the status quo; it leaves the defendant worse off.” *Id.* at 1644–45.

Following *Kokesh*, the Eighth Circuit addressed an SEC civil enforcement action seeking to enjoin the defendant from violating securities laws and requesting disgorgement of proceeds from past securities violations. *SEC v. Collyard*, 861 F.3d 760 (8th Cir. 2017). The parties conceded that the disgorgement sought was a “penalty” under *Kokesh*. *Id.* at 763. The Eighth Circuit held that the district court’s award of the other injunctive relief was not a “penalty” under *Kokesh* because it “(1) require[d] only obedience with the law, (2) [wa]s based on evidence of a likelihood to violate that law [in the future], and (3) [sought] to protect the public prospectively from [defendant’s] harmful conduct rather than punish [defendant].” *Id.* at 764.

A Labadie injunction does not restore *status quo ante*, is massively costly, a cost that will affect customers of Ameren, and does not serve to help any one person; under Plaintiffs’ theory, it serves to compensate the public generally. (AFOF ¶¶ 283, 288, 294-296.) Plaintiffs’ own argument for an injunction against Labadie underscores why that relief would be penal according to *Kokesh* and *Collyard*. In Plaintiffs’ words, they seek the Labadie injunction on their theory that Ameren must “pay back the pollution debt [] incurred.” Pls.’ Trial Br. at 2, ECF No. 1061 (Mar. 27, 2019); *id.* at 5 (stating Ameren has a “pollution debt to the public” and must “pay it back.”); Trial Vol. 1A at 13:2-3 (injunction at Labadie “would [] pay back the pollution debt incurred”). The amount of that debt, according to Plaintiffs, is measured as what Rush Island wrongfully emitted (while lawfully operating) since the time of the Projects. Their mitigation theory is nearly a verbatim definition of “disgorgement.” *See Kokesh*, 137 S. Ct. at 1640

(“Generally, disgorgement is a form of ‘[r]estitution measured by the defendant’s wrongful gain.”) (quoting Restatement (Third) of Restitution and Unjust Enrichment §51, Comment *a*, p. 204 (2010)).

The public needs no protection from continued lawful operations at Labadie. Such an injunction goes far beyond requiring obedience with the law. Plaintiffs have urged the Court to enjoin Labadie as payback of a debt to compensate the public for violating environmental laws, without compensating any specific individual victim for his loss, and they seek that relief in the public interest. *Kokesh* holds that is a penalty. 137 S. Ct. at 1638 (defining “penalty” as a “punishment [] imposed or enforced by the State for a[n] offen[s]e against its laws,” and explaining that a remedy “imposed by the courts as a consequence for violating public laws” constitutes a penalty). Any penal relief is barred in this case because that form of relief was voluntarily forfeited by the United States.

The Fifth Circuit recently indicated in a plurality opinion in a PSD case that District Courts must assess whether “injunctive relief” to “clean up the pollution” from a plant found to be in violation of the PSD program would constitute a “penalt[y] in disguise.” *U.S. v. Luminant Generation Co., LLC*, 905 F.3d 874, 890-91 (5th Cir. 2018) (Elrod, J.) (citing *Kokesh*); *see also id.* at 888-889 (Jolly, J.) (“Whether such injunctive relief is, in any of its aspects, considered a penalty has not been addressed in this appeal.”). And the United States conceded in its briefing to the *Cinergy* court that “future pollution reductions *from the same plant*” are “the *best possible method* for the Court to redress the illegal emissions” and “analogous to the traditional remedy of disgorgement of ill-gotten gains.” Plaintiff’s Trial Br., *U.S. v. Cinergy Corp., et al.*, 618 F. Supp. 2d 942 (S.D. Ind. 2009) (No. 199CV01693), 2009 WL 632433 at *19-20 (emphases added). Plaintiffs should not be permitted to seek a remedy in this case — future emissions reductions

from Labadie — that the United States previously told a different federal court was “analogous” to disgorgement, and avoid *Kokesh*’s express holding that disgorgement is a penalty.

Furthermore, subsequent cases have applied *Kokesh* to find that remedies other than “disgorgement” can constitute a penalty. In *Saad v. SEC*, 873 F.3d 297 (D.C. Cir. 2017), the D.C. Circuit remanded and ordered the SEC to consider whether a decision by the Financial Industry Regulatory Authority (“FINRA”) to permanently bar the defendant from FINRA membership and from working with its members was “impermissibly punitive” in light of *Kokesh*. 873 F.3d at 304. Then-judge Kavanaugh wrote a concurrence in support of the remand, noting “[t]he Supreme Court’s reasoning in *Kokesh* was not limited to the specific statute at issue there. Like disgorgement paid to the Government, expulsion or suspension of a securities broker does not provide anything to the victims to make them whole or to remedy their losses. Therefore, in light of the Supreme Court’s analysis in *Kokesh*, expulsion or suspension of a securities broker is a penalty, not a remedy.” *Id.* at 305 (emphasis added) (Kavanaugh, J., concurring).

Similarly, in *SEC v. Gentile*, No. CV 16-1619 (JLL), 2017 WL 6371301 (D.N.J. Dec. 13, 2017), the District Court there stated, “[w]hile the remedy [in *Kokesh*] differs from the one in the matter *sub judice* (i.e., disgorgement versus injunction), the Supreme Court’s reasoning is quite instructive. *Id.* at *3. Consistent with the above law, the Court found that “[p]enal laws, strictly and properly, are those imposing punishment for an offense committed against the State.”” *Id.* (quoting *Kokesh*). The *Gentile* court, applying *Kokesh*’s framework, concluded that the two mandatory injunctions that the SEC sought against him were penal because they would stigmatize the defendant in the public eye, because they would not “restore any ‘*status quo ante*,’” and because SEC did not identify “a single ‘victim’ or specifically harmed party that

these injunctions would be designed to compensate or benefit.” *Id.* at *4. With respect to the injunction barring the defendant from participating in any “penny stock” offerings, the court noted that such an injunction would be penal not only because it would not restore the *status quo ante* but also because it would “restrict Defendant’s business structure and methodology, *in perpetuity*.” *Id.*² The same is true here where the Labadie pollution controls would continue indefinitely. (AFOF ¶¶ 299-303.)

This Court has already ruled that “EPA represents that it will not seek relief that crosses the line from injunctive or equitable relief to legal or punitive relief, and I can hold them to that.” *Ameren Missouri*, 2016 WL 468557, at *3. Because injunctive relief at Labadie constitutes a penalty, Plaintiffs, having made a voluntary choice to avoid a jury trial by dropping claims for penalties, are not entitled to any injunctive relief involving the Labadie plant.

E. Injunctive Relief against an Innocent Plant Would Be Unprecedented.

Imposing a penalty against a non-violating power plant would be unprecedented. No court has ever granted such relief during the fifty-five years that the Clean Air Act has existed.

All courts from which the United States has sought a mandatory injunction against an innocent plant have rejected that extreme remedy. The District Court in *U.S. v. Cinergy* held that the U.S. and other plaintiffs had no equitable basis to seek a mandatory injunction at units that

² EPA guidance is also clear that any PSD “mitigation” cannot extend to non-PSD-violating units. According to EPA, mitigation must “redress the *specific* harm caused by the *violations*,” and EPA “should not seek mitigation that is out of proportion to the harm.” EPA Memorandum, *Guidance on the Appropriate Injunctive Relief for Violations of Major New Source Review Requirements*, at 3 (Nov. 17, 1998) <https://www.epa.gov/sites/production/files/2015-07/documents/nsrguida.pdf>. Even the cases EPA cites in support of its “mitigation” memorandum did not order mitigation at units or facilities that had not violated any environmental statutes. *Id.* at 6.

had not been found in violation of PSD. 618 F. Supp. 2d 942 (S.D. Ind. 2009) *rev'd on other grounds*, 623 F.3d 455 (2010). The District Court agreed with Cinergy that the mitigation proposal did not bear an equitable relationship to the degree and type of harm caused by certain units' PSD violations. *Id.* at 967. These non-violating units had combined emissions that were twice that of the violating units, and therefore ordering installation of pollution controls on the non-violating units would far exceed the irreparable harm the court found the government had established. *Id.* Such relief would be a "penalty without sufficient nexus to the violation to be considered mitigation." *Id.* The conclusion and reasoning of the *Cinergy* court could not be clearer:

Plaintiffs have not proven that Cinergy violated any CAA provisions with respect to units 4 and 6. Therefore, it is the Court's view that imposition of such a remedy is punitive in nature and the Court has already determined that such remedy is not available to Plaintiffs for Cinergy's violations of the NSR for the projects at Wabash River units 2, 3, and 5. Thus, any surrender of SO₂ allowances that is tied to installation of pollution controls on units 4 and 6 is also a penalty without sufficient nexus to the violation to be considered mitigation.

Id. at 967. That is, not only did that court outright reject any injunction against an innocent unit as a penalty, but it also rejected SO₂ allowance surrenders tied to injunctive relief against innocent units as lacking a sufficient nexus to the PSD violation to constitute "mitigation." *Id.* Here, as in *Cinergy*, the Labadie plant is a four-unit plant, compared to the two units at Rush Island, so Labadie's emissions are roughly twice that of the violating units. (AFOF ¶¶ 5, 12, 299-300.) And Plaintiffs have not even attempted to prove a PSD violation at Labadie, so enjoining that plant to "remedy" Rush Island violations is a penalty.

The same attempt to impose an injunction on units not found to have violated PSD was again rejected in *U.S. v. Westvaco Corp.*, 2015 WL 10323214, at *12. There, the court declined to issue an injunction requiring Westvaco to install controls on two boilers. *Id.* at *12. One of the boilers, Boiler 25, was found to have excess emissions, but the second, Boiler 24, was

determined to be a “totally innocent boiler.” *Id.* Here, Labadie is also a “totally innocent” plant and should not be penalized for PSD permit violations at Rush Island.

Plaintiffs mislead on and misstate the reasoning in *Westvaco* where that court found it inappropriate to mandate the installation of pollution controls for a PSD violation. (Pls.’ Opp. to Ameren MSJ No. 3 at 9-10, ECF No. 988.) Plaintiffs tell this Court that the change in ownership of the facilities in *Westvaco* was the basis for the denial of injunctive relief an innocent plant. (*Id.* at 9-10 (quoting *Westvaco Corp.*, 2015 WL 10323214, at *11).) That is incorrect. In fact, the *Westvaco* court declined to order installation of pollution controls on the violating unit, Boiler 25, because of myriad “substantial – seemingly insurmountable as a practical matter – problems presented in regard to the [c]ourt’s determination of the precise equipment and installation to require” Boiler 25 to comply. *Westvaco Corp.*, 2015 WL 10323214, at *11. Not only was there an insufficient showing to entitle the United States to a mandatory injunction against the violating unit, Boiler 25, but there was an even weaker case to argue for a mandatory injunction against the totally innocent unit, Boiler 24. *Id.* at *13. That court appropriately declined both requested injunctions. *Id.* at *11, *13 (“the Court shall not exercise its discretion to issue an injunction that would require Westvaco to install controls on Power Boiler 25[.] The Court shall not issue an injunction requiring Westvaco to install controls on Power Boiler 24.”).

Plaintiffs’ claim that the change in facility ownership was the “only” reason for the decision not to enjoin the innocent unit is not supported by the *Westvaco* opinion. (Pls.’ Opp. to Ameren MSJ No. 3 at 10, ECF No. 988.) The *Westvaco* court considered the change in ownership in rejecting both the compliance and remedial injunctions, but more importantly, it set out a three-factor test for evaluating remediation, but made no analysis of those three factors

before concluding that remedial injunctive relief was unavailable. *Westvaco Corp.*, 2015 WL 10323214, at *12-*13. In particular, there was no analysis of whether enjoining the innocent Boiler 24 would “bear[] an equitable relationship to the degree and kind of wrong it is intended to remedy.” *Id.* Plaintiffs’ entire distinction of *Westvaco* from the case here rests on their unsupported leap from the *Westvaco* court’s not needing to analyze all relevant factors for injunctive mitigation before rejecting the United States’ proposal, to Plaintiffs’ claim that “only” one factor was dispositive. The *Westvaco* opinion does not support Plaintiffs’ flawed interpretation and attempted distinction from this case. Enjoining innocent units as mitigation has universally been rejected by the courts.

Granting such unprecedented relief would also thwart the statutory enforcement scheme designed by Congress by allowing Plaintiffs an end run around every enforcement step under the Clean Air Act. A PSD enforcement action begins with an investigation into potential PSD violations. 42 U.S.C. § 7413(a)(1); *U.S. v. Duke Energy Corp.*, 5 F. Supp. 3d 771, 779 (M.D.N.C. 2014). If the Administrator believes the Act or associated regulations have been violated, then EPA issues a “Notice of Violation” (“NOV”) to the source. *Id.* The NOV is an absolute requirement; it is jurisdictional. *U.S. v. AM Gen. Corp.*, 808 F. Supp. 1353, 1362 (N.D. Ind. 1992), *aff’d*, 34 F.3d 472 (7th Cir. 1994). After an NOV issues, a lawsuit must be filed. *Id.* After that, the plaintiff must prove liability for the alleged violation. *Environment Texas Citizen Lobby, Inc. v. ExxonMobil Corp.*, 824 F.3d 507, 515 (5th Cir. 2016). Each of these steps is necessarily connected to specific project(s) at a specific source. 42 U.S.C. § 7413; *U.S. v. Pan Am. Grain Mfg. Co.*, 29 F. Supp. 2d 53, 56 (D.P.R. 1998) (“Under § 7413(b), EPA can bring such civil enforcement action ‘only on the basis of the *specific violation alleged in the NOV*’”) (emphasis added).

Allowing injunctive relief against Labadie would set a dangerous precedent by which the federal government and private interest groups would be able to secure extraordinarily costly and burdensome controls on non-PSD triggered units—without ever proving that such units undertook projects subject to PSD, and without complying with statutes of limitations—by merely alleging that controls on such non-PSD units “mitigate” or “remediate” purported harm from a unit at another plant that has triggered PSD. Such an unforeseeable remedy is not narrowly tailored to the permit violations at Rush Island.

F. Alternatively, Retirement of SO₂ Allowances Is the Only Injunctive Relief that Is Narrowly Tailored and Supported by the *eBay* Factors.

If the Court determines mitigation or remediation is an appropriate part of any ordered remedy, Ameren has proposed retirement of unused SO₂ allowances that it has “banked” as part of EPA’s Cross-State Air Pollution Rule (“CSAPR”) program, 76 Fed. Reg. 48272 (Aug. 8, 2011), in an amount equal to the “excess emissions” that Plaintiffs have alleged in this case. Allowance retirement would accomplish full, one-to-one mitigation of these alleged “excess emissions,” without improperly penalizing Ameren, and is thus a perfectly tailored mitigation remedy that is supported by the *eBay* factors.

1. The Purpose and Operation of the CSAPR Allowance Program Supports the Allowances’ Use for Mitigation

EPA issued the CSAPR in 2011 to establish annual state emissions budgets and, consistent with those budgets, allocated allowances for emissions of SO₂ and other pollutants to each covered coal-fired electric generating unit, including those in Missouri.³ As its name

³ Although CSAPR was issued in 2011, it did not become effective until 2015. *See* U.S. Environmental Protection Agency, *Date Change Affirmation Rules for the Cross-State Air*

implies, CSAPR is concerned with limiting downwind, cross-state air pollution. *See* Declaration of Reid P. Harvey, Director of the Clean Air Markets Division in the Office of Atmospheric Programs within the Office of Air and Radiation at EPA, in *U.S. v. Westvaco*, 00-cv-02602, ECF #420-3 (“Harvey Decl.”) at p. 14. The SO₂ allowances from the CSAPR program are created and distributed by the EPA as a means to reduce emissions and meet the Clean Air Act Good Neighbor Provision addressing interstate transport of pollutants. 42 U.S.C. §7410(a)(2)(D)(i)(I). In general, an affected unit for CSAPR purposes is any stationary, fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine located in a covered state that at any time on or after January 1, 2005 serves a generator with nameplate capacity larger than 25 megawatts producing electricity for sale. (Harvey Decl. at 15.) Each unit is allocated a number of allowances per year, with each allowance being equal to one ton of emissions. (AFOF ¶ 268.) Shortly after the end of the year, the unit must surrender one eligible “allowance” for each ton of its reported emissions for the year. (Harvey Decl. at 18.) That is, each allowance is equivalent to an entitlement to emit one ton of SO₂. The EPA has acknowledged the applicability of CSAPR allowances to mitigating harm caused by excess emissions in its notices of proposed rulemaking. *See* 81 Fed. Reg. 74544 (Oct. 26, 2016); 81 Fed. Reg. 74573 (Oct. 26, 2016).

Importantly, CSAPR allows operators of such units the flexibility to earn and bank allowances and allocate allowances fleet-wide. As the Director of EPA’s Clean Air Markets Division averred to the *Westvaco* court, if an operator’s emissions at one of its units fall below its budgeted amount such that that unit retains or “banks” allowances under CSAPR, it can allocate

Pollution Rule (CSAPR)<https://www.epa.gov/csapr/date-change-affirmation-rules-cross-state-air-pollution-rule-csapr> (last accessed 5/23/2019); *see also* AFOF ¶ 7.

those banked allowances to meet its obligations at another unit in the current year or future years. (Harvey Decl. at p. 18.) Every owner or operator must either demonstrate compliance with its fleet-wide allowance allotment or purchase additional allowances to cover its annual emissions in a market created by EPA for that purpose. Allowances that go unused in a given year roll over to the next year and can be banked indefinitely for future use or sale. (*Id.*)

2. The United States Has Urged Courts to Order Retirement of SO₂ Allowances as Mitigation Before, and Courts Have Done So.

In *Cinergy*, for purposes of mitigating the defendant there's so-called excess emissions, the plaintiffs proposed an injunction requiring (1) installation of pollution controls at two units at which no violation of the Clean Air Act had been found and (2) requiring the defendant to surrender SO₂ emissions allowances to EPA in amounts matching the SO₂ "excess emissions" alleged in that case. *U.S. v. Cinergy*, 618 F. Supp. 2d at 960. The *Cinergy* court rejected plaintiffs' proposal that it order the installation of pollution controls at the two non-violating units as "lacking an equitable relationship to the degree and kind of harm it is intended to remedy" but ordered surrender of SO₂ allowances matching the excess emissions amount it had found. *Id.* at 967-968. The *Cinergy* court agreed with the government's position that there was "an elegant nexus" between the surrender of SO₂ allowances and the purported harm in that case. *Id.* at 967-968.⁴

⁴ Further, as noted in the *Cinergy* decision, EPA regularly includes allowance surrender in consent decrees it agrees to for alleged NSR violations, and courts regularly approve these consent decrees. *U.S. v. Cinergy*, 618 F. Supp. 2d at 68 (citing, *e.g.*, *United States v. Am. Elec. Power Serv. Corp.*, Consent Decree, at pp. 70-84, 91-99 (available at <https://www.epa.gov/enforcement/consent-decree-and-modifications-american-electric-power-service-corporation>)).

Similarly, in *United States v. Midwest Generation, LLC*, the government argued to the Seventh Circuit that “ComEd could mitigate the ongoing harms by buying and retiring tradeable emissions allowances. The emissions allowance system allows ComEd to mitigate the harm it has caused ... by purchasing emissions allowances and ‘retiring’ them unused.” Reply Brief of the United States at 23, *United States v. Midwest Generation, LLC*, (No. 12-1026, ECF No. 41). As the government put it in that case, retiring unused allowances “would provide benefits similar to the benefits the company would generate by installing pollution controls itself. Both actions would reduce ambient air pollution and thereby mitigate the harm caused by over two million tons of past illegal emissions.” Opening Brief of the United States at 41, *United States v. Midwest Generation*, (No. 12-1026, ECF No. 25). Indeed, under CSAPR, “pollution controls and emissions allowances are equivalent” because buying allowances accomplishes the same result as installing controls – improving air quality in the same amount as the purported excess emissions. *Id.* at 40.

3. Retirement of Ameren’s Legitimately Banked Allowances Is the Most Appropriate Mitigation Remedy, to the Extent Any Is Appropriate.

Ameren has taken major steps to anticipate and meet the requirements of CSAPR, (*see* AFOF ¶¶ 264, 275), and has thus been able to reduce its fleet wide annual emissions of SO₂ by over 100,000 tons since 2009, (*see* AFOF ¶ 264; Ex. UU). These emissions reductions have, pursuant to CSAPR, resulted in Ameren’s banking of approximately 240,000 SO₂ allowances fleet-wide since CSAPR became effective in 2015. (AFOF ¶ 272; *see also* Exhibit B to Ameren’s Pre-Trial Motion *in Limine* #2 (ECF #1069-2). As reflected in its publicly-available resource planning documents, Ameren plans to rely on these CSAPR allowances for its future compliance needs. (AFOF ¶ 276.)

Retirement of these unused allowances thus provides the Court with a remedy that is just as effective as pollution controls at the Labadie plant, but that could be appropriately tailored. As explained above, broader relief would be inappropriate. *See* Section II(C), *supra*. “Injunctive relief must be tailored to remedy the specific harm alleged, and an overbroad preliminary injunction is an abuse of discretion.” *Nat. Res. Def. Council, Inc. v. Winter*, 508 F.3d 885, 886 (9th Cir. 2007) (vacating overbroad injunction); *Lytle*, 612 F. App’x at 863 (remanding with instructions that the district court reconsider its broad ban on sales of unapproved medical devices and to consider “whether a more narrowly-tailored injunction might be sufficient”).

Plaintiffs’ focus on the current, relatively low cost of allowances during the remedy trial reveals that they want to impose the most costly remediation possible on Ameren, without regard to whether their proposed remediation is narrowly tailored and without regard to the United States’ prior positions that allowance surrender is appropriate mitigation. The current market value of an SO₂ allowance is irrelevant to the appropriateness of surrendering allowances in mitigation, unless Plaintiffs want their mitigation remedy to go beyond straight mitigation overextending to a remedy that punishes Ameren for the permit violations. Put another way, Plaintiffs want the mitigation remedy the Court orders to hurt Ameren, and that is both unlawful under *Kokesh* and barred in this case. *See* Section III (D), *supra*; *see also U.S. v. Ameren Missouri*, No. 4:11 CV 77 RWS, 2016 WL 468557, at *1 (E.D. Mo. Feb. 8, 2016) (quoting *Johnson v. S.E.C.*, 87 F.3d 484, 488 (D.C. Cir. 1996) (“[w]hen relief ‘goes beyond remedying the damage caused to the harmed parties by the defendant’s action,’ [] it is properly viewed as punitive ...”).

G. Sierra Club Does Not Have Standing for the Injunctive Remediation It Seeks.

Plaintiffs were fully united in their presentation of evidence of purported air impacts and health harms. Plaintiffs jointly presented and argued for remediation based on their experts’

claims of 160,000 tons of excess SO₂ emissions from Rush Island. (AFOF ¶¶ 32, 53-54.) But the one place in the entire remedy trial where they have diverged is that they seek different mitigation remedies for the same purported harm. Sierra Club's organizational standing in the case⁵ does not permit it to seek injunctive relief broader than what the United States seeks.

Sierra Club argued that "Sierra Club members like Douglas Melville are directly affected by the excess emissions from Rush Island, and they would directly benefit by bringing Rush Island into compliance, as well as by remediating the excess pollution at Labadie." (Blustein, Vol. 6A at 31:16-21.) In closing argument, Sierra Club asked for "faster remedial relief, which can be accomplished by lowering the SO₂ cap at Labadie below 18,000 tons per year[.]" (*Id.* at 33:10-11.) The 18,000 ton per year emissions cap at Labadie is a mitigation remedy the United States proposed at closing argument, while Sierra Club argued for "remediating the harm as quickly as possible." (*Id.*; AFOF ¶¶ 280-81.)

The United States seeks a mitigation remedy at Labadie on behalf of the public. (Beers, Trial Vol. 6A at 19:22.) Sierra Club has sought an even more aggressive injunction than the United States, for which it does not have standing. Sierra Club does not have standing, and has never sought standing, on behalf of the public. *See* Mem. Op. at 11, ECF No. 1055 (Mar. 27, 2019) (finding that Sierra Club has organizational standing to bring suit on behalf of its members "with respect to the requested relief at Rush Island"); Sierra Club Mem. in support of Partial

⁵ Late in the afternoon on May 21, 2019, Sierra Club filed a motion to supplement the trial record on Sierra Club's standing in this case. (ECF No. 1105.) Sierra Club did not provide any prior warning or notice to Ameren before filing the motion. Ameren is evaluating the motion, and pursuant to LR 7-4.01(B), Ameren has until May 28, 2019 to file a response. Because Sierra Club filed its motion just two days before the deadline for the parties' post-trial filings, Ameren reserves all arguments it may make in responding to the motion and reserves the right to address the motion in Ameren's responsive post-trial filings.

MSJ on Standing at 5, ECF No. 942 (Sept. 28, 2018) (stating that “Sierra Club brings suit on behalf of its members”). Sierra Club also argued at closing on behalf of “Sierra Club and its members.” (Blustein, Vol. 6A at 31:16.)

The Court previously ruled Sierra Club must establish its organizational standing “separately for *each form* of relief sought.” Mem. Op. at 12, ECF No. 1055 (Mar. 27, 2019) (quoting *Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc.*, 528 U.S. 167, 185, (2000)). As a legal matter, the injunctive relief for which Sierra Club could establish organizational standing cannot be even broader than the injunctive relief that the United States may seek on behalf of the public as a whole. *Conservation Law Found. v. Pub. Serv. Co. of New Hampshire*, No. 11-CV-353-JL, 2012 WL 4477669, at *10 n.11 (D.N.H. Sept. 27, 2012) (determining that the Conservation Law Foundation (CLF) did not have standing to seek injunctive relief in the form of remedial actions for defendant’s CAA violations in part “because this relief is not focused on CLF members’ alleged injuries, but seeks to benefit the public at large and the environment as a whole.”). This also holds as a matter of logic: Sierra Club’s testimony, filings, and arguments about remediation are tied to mitigating harm purportedly experienced by its members, but Sierra Club has never presented any evidence that its members are impacted to any greater degree by the “excess” emissions than the general members of the public. Therefore, even if Sierra Club can establish standing to seek a mitigation injunction against Labadie, it does not have standing to seek a Labadie injunction broader than what the United States seeks.

IV. Plaintiffs Are Not Entitled to Their Requested Injunctive Relief Against Rush Island.

A mandatory compliance injunction is not automatically equitable by virtue of the Court having found PSD violations at Rush Island. Instead, the Eighth Circuit’s mandatory injunction standards and *eBay*’s case-by-case analysis and balancing of four factors apply to any injunction

against Rush Island. “An injunction is a matter of equitable discretion; it does not follow from success on the merits as a matter of course.” *Winter*, 555 U.S. at 32; *see also LAJIM*, 917 F.3d at 943; *United States v. Oakland Cannabis Buyers’ Coop.*, 532 U.S. 483, 496 (2001) (“[A] grant of jurisdiction to issue [equitable relief] hardly suggests an absolute duty to do so under any and all circumstances.”) (quoting *Hecht Co. v. Bowles*, 321 U.S. 321, 329 (1944)); *Sierra Club v. Tenn. Valley Auth.*, 592 F. Supp. 2d at 1377.

A. Ordering Ameren to Obtain a Minor Permit Is Appropriate Equitable Relief and Fully Complies with the PSD Rules.

If the Court finds that issuance of a mandatory injunction is the appropriate equitable relief for PSD compliance at Rush Island, the Court has multiple PSD compliance options from which to choose. Consistent with the goals of the PSD program, the evidence at trial showed that prior to a project, PSD compliance can consist of any of the following:

1. Canceling the project;
2. Implementing measures to prevent a significant emissions increase, without getting a permit;
3. Obtaining a minor permit and meeting *de minimis* limits; or
4. Obtaining a PSD permit and meeting BACT limits.

(ASOF ¶¶ 326-28.)

While canceling the Projects is not an option now, the other options, all of which are equally compliant with the law, still remain available to the Court and to Ameren in order to comply with PSD. As this Court already found when it rejected Plaintiffs’ summary judgment argument that BACT is the only PSD compliance option in this case, the Clean Air Act has not foreclosed the exercise of equitable discretion by this Court in fashioning the appropriate remedy. *United States v. Ameren Missouri*, 2019 WL 952108, at *7 (E.D. Mo. 2019). Here, ordering Ameren to obtain a minor permit with an enforceable annual emission limit is

appropriate equitable relief for two reasons. First, the goal of the PSD program is not to reduce emissions, but rather to avoid the significant deterioration of air quality. (ASOF ¶ 109.) The PSD program does not require a source to decrease its emissions; indeed, it allows emissions to increase by up to 40 tons per year. (ASOF ¶ 38.) Second, the PSD program seeks to avoid penalizing economic growth and development. *Alabama Power Co. v. Costle*, 636 F.2d 323, 378 (D.C. Cir. 1979) (PSD program is intended to “preserve air quality” with only a “minimum of economic hardship”). Ordering Ameren to meet BACT for SO₂, and decrease emissions by 90% or more would be contrary to, and would exceed, the goal of the PSD regulations. Requiring Ameren to install controls costing over \$1 billion would be a disproportionate remedy, given that the original Projects cost just tens of millions of dollars each.

Ordering Ameren to obtain a minor permit that includes an enforceable limit of 39 tons above the baseline actual emissions level⁶ would match the goals of the PSD program and would be an appropriately narrowly-tailored injunction. Requiring further emissions reductions would exceed the regulatory goals of PSD.

B. If the Court Finds that BACT Is the Appropriate Equitable Relief At Rush Island, the Court Should Exercise Its Discretion For Determination of BACT.

1. The Court Should Not Divorce BACT from PSD Permitting.

The Eighth Circuit has recognized that determining BACT goes “hand in hand” with applying for a PSD permit. *Otter Tail*, 615 F.3d at 1017. “BACT . . . is an emission limitation . . . which the permitting authority”—here, MDNR—“on a case-by-case basis, taking into account

⁶ Baseline SO₂ emissions at Unit 1 were 14,874 tons per year (Sahu, Aug. 26, 2016 Liability Vol. 5 at 49:2-20); 39 tons more would be 14,913. Baseline SO₂ emissions at Unit 2 were 14,288 tons per year (*Id.* at 77:21-78:4); 39 tons more would be 14,327.

energy, environmental, and economic impacts and other costs, determines is achievable for the facility in question.” *Id.* at 1011. If the Court determines that BACT is the appropriate equitable relief for PSD compliance at Rush Island, then the most appropriate ruling would be to order Ameren to submit a PSD permit application to MDNR so the permitting authority can determine BACT. In its second motion for summary judgement, Ameren explained why this Court should not step in to MDNR’s role and responsibility as the permitting authority in Missouri by determining BACT. Ameren incorporates its arguments from its summary judgment submissions and oral argument here.⁷

2. Alternatively, the Court Should Find that DSI Constitutes BACT at Rush Island.

a. Plaintiffs Misconstrue the Law as It Applies to BACT.

Plaintiffs want to reduce the BACT analysis down to the question of whether or not Ameren can afford scrubbers. But neither EPA guidance nor actual BACT determinations in the real world have ever reduced the BACT analysis to merely a question of affordability. Rather, the statutory definition of BACT expressly requires a case-by-case evaluation of “economic impacts and other costs.” 42 U.S.C. § 7479(3). And while Step 2 in the top-down approach for BACT is “eliminate technically infeasible options,” Step 4 requires an evaluation of the “most effective controls” and is not simply “eliminate economically infeasible or unaffordable options” as Plaintiffs claim. (ASOF ¶ 347.) Indeed, cost-effectiveness, particularly incremental cost-effectiveness, is the touchstone of analysis in Step 4, as shown in numerous instances, as set out below. Plaintiffs failed to rebut this testimony:

⁷ ECF #s 946, 947, 949, 1010, 1040 at 26:10-35:14.

- EPA itself, in the Deseret Bonanza BACT determination, gathered and applied over a dozen incremental cost-effectiveness analyses in reaching its conclusion in that proceeding, and none of those determinations required BACT that cost more than \$5,000 per ton. (ASOF ¶¶ 348, 352.);
- In Bonanza, EPA itself rejected the most effective control, in favor of the secondary control, on the grounds that the secondary control was more cost-effective. (*Id.*);
- In numerous MDNR BACT determinations, MDNR rejected the most effective control and accepted a lower control option, on the basis of cost-effectiveness. (ASOF ¶¶ 349-50, 354);
- MDNR's testimony confirmed that MDNR takes cost-effectiveness into account when determining BACT and never approved as BACT a control that cost more than \$5,000/ton. (*Id.*);
- Plaintiffs' expert Dr. Staudt also took cost-effectiveness into account in reaching his BACT opinion, rejecting a control option (gas conversion) because it was too expensive at \$7,750/ton. (ASOF ¶ 356);
- Ameren's expert, Colin Campbell, testified that in his experience in over [number] BACT permitting situations across the country, permitting agencies impose a soft cap of \$5,000/ton on controls for SO₂. (ASOF ¶ 348-49);
- EPA's own Draft 1990 NSR Manual explains that an evaluation of "economic impacts" expressly includes an evaluation of "total cost effectiveness and incremental cost effectiveness" as part of the top-down approach for determining BACT. (ASOF ¶ 347.); and
- There was no dispute at trial that FGD, compared to DSI, at Rush Island was incrementally more costly, at about \$9,500/ton removed, which was nearly double the soft cap shown in the EPA Deseret Bonanza determination and the MDNR determinations. (ASOF ¶ 362.)

While nothing in EPA's draft guidance is binding on state permitting authorities or operators of sources, it is telling that EPA's litigation approach regarding BACT in this case drastically departs from its own guidance. In applying the top-down approach in the real world, both EPA and MDNR recognize the importance of evaluating cost-effectiveness and have eliminated controls based on cost-effectiveness alone. (ASOF ¶¶ 349-50, 354.) Here, there is no dispute that DSI is far more cost-effective than scrubbers at Rush Island. (AFOF ¶¶ 362, 367-82, 386-99.)

Nothing in the 2004 Supreme Court's decision involving Alaska's state permitting authority ADEC suggests that cost-effectiveness should be ignored when determining BACT or that scrubbers must be chosen over DSI as BACT for SO₂ at Rush Island. In fact, cost-effectiveness was the primary factor in determining BACT in that case. *Alaska Dept. of Environmental Conservation v. E.P.A.*, 540 U.S. 461, 477 (2004) (ADEC determined that costs between \$1,586 and \$2,279 per ton were well within the acceptable range). Although ADEC had already concluded that a control with 90% removal efficiency at a zinc mine was well within the range of reasonable cost-effectiveness, ADEC changed its mind without justification and stated that the 90% control was too expensive and determined that a 30% control was BACT. *Id.* at 466-67, 499. The Supreme Court criticized ADEC for changing its mind without any factual basis regarding the higher control's "impact on the mine's operation, profitability, and competitiveness" or zinc prices. *Id.* at 462, 466-67. The opinion specifically recognized, however, EPA's repeated acknowledgement that the 30% control could be BACT if the permitting authority prepared an appropriate record. *Id.* at 466-67. Unlike ADEC, there has been no state conclusion in this case that an incremental cost of \$9,535 per ton for scrubbers at Rush Island is cost-effective, and Plaintiffs have failed to provide a single example of MDNR requiring a control with an incremental cost greater than \$5,000 per ton. Additionally, the parties agree that installation of scrubbers at Rush Island would increase the cost of electricity for Missouri rate payers.

b. A Proper Top-Down BACT Analysis for SO₂ at Rush Island Results In DSI at 50% Removal Efficiency.

The process for determining BACT begins with the source's proposal based on the top-down methodology. Ameren's expert Mr. Campbell and Plaintiffs' expert Dr. Staudt both conducted a top-down BACT analysis, but Mr. Campbell concluded that BACT for SO₂ was an

emission rate of 0.275 lb/MMBtu based on DSI with a 50% removal efficiency, while Dr. Staudt arrived at 0.05 lb/MMBtu based on scrubbers. Mr. Campbell's BACT analysis in this case was based on his decades of experience training and advising EPA, state permitting authorities, and source owners on how BACT and PSD compliance is achieved in the real world. (ASOF ¶¶ 326, 355.) Mr. Campbell knows how BACT is determined through PSD permitting, because he routinely writes and submits PSD permit applications with BACT analyses for PSD compliance, something Dr. Staudt admitted he has never done. (ASOF ¶ 326.) Mr. Campbell's real-world experience is significant, because it provides the context of why determining BACT at Rush Island is such a unique analysis that has never before been done. Without this real-world context, it is easy to get fixated on the dozens of other BACT determinations cited by Dr. Staudt for new units that must install scrubbers to meet a minimum 70% removal efficiency under NSPS Subpart Da, which undisputedly does not apply to Rush Island. (ASOF ¶¶ 337-39.) Without this real-world context, simply reading the DTE Monroe BACT determination – the one and only BACT determination for an existing coal plant that Plaintiffs presented at trial – gives the misleading impression that BACT at an existing unit must also be scrubbers. But as Mr. Campbell, who actually wrote the BACT analysis for the DTE PSD permit application, explained at trial, DTE Monroe installed scrubbers at its units for CAIR compliance, not BACT. (ASOF ¶ 340.) The fact is that no existing coal plant in the history of the PSD program has installed scrubbers as the result of a BACT determination for SO₂. If Rush Island is required to do so, it would be the first. (ASOF ¶ 341.)

NSPS Subpart Da and LAER are the two primary drivers that require coal plants to install scrubbers for PSD compliance, and neither of those standards applies to Rush Island. MDNR agrees that the NSPS 70% minimum removal efficiency for new units would not apply to BACT

at Rush Island, which is an existing unit. (ASOF ¶ 338.) And because Rush Island is in a NAAQS attainment area, LAER emissions rates do not apply to this case. The distinction between LAER and BACT is significant, because costs of the pollution control technology are not considered for LAER, but consideration of costs is a key requirement for BACT. (ASOF ¶ 344.) Without the emissions constraints of NSPS and LAER, an applicant like Rush Island is able to propose DSI as BACT, because DSI is far less costly yet far more cost-effective than scrubbers. (ASOF ¶ 338.)

There is no dispute that DSI was technically feasible at Rush Island at the time of the Projects and is technically feasible at Rush Island today. (ASOF ¶¶ 364-366.) There is also no question that DSI with an SO₂ removal efficiency of 0.275 lb/MMBtu is far less costly and far more cost-effective than scrubbers at Rush Island. (ASOF ¶¶ 367-382.) Plaintiffs have not disputed any of DSI cost estimates presented by Ameren's engineering expert Mr. Snell. The average cost-effectiveness of DSI is \$2,833 \$/ton versus \$5,849 \$/ton for wet scrubbers. (ASOF ¶ 362.) The incremental cost-effectiveness of wet scrubbers is \$9,535 compared to DSI, and Dr. Staudt agreed that an incremental cost of \$7,750 \$/ton is too expensive to be BACT. (ASOF ¶¶ 356, 362.) As Mr. Campbell showed, MDNR, other state permitting authorities, and even EPA consistently reject controls as BACT when the incremental cost-effectiveness is over \$5,000 \$/ton. (ASOF ¶¶ 348-61.) Despite Dr. Staudt's review of MDNR's BACT determinations for Missouri sources and nation-wide BACT determinations collected in EPA's RACT/BACT/LAER Clearinghouse, Plaintiffs have been unable to find a single instance where a BACT control with an incremental cost-effectiveness greater than \$5,000/ton was required.

Mr. Campbell showed through real-world examples that permitting authorities have repeatedly rejected the top control as BACT when a more cost-effective option was available.

(ASOF ¶¶ 358-60.) When EPA itself was the PSD permitting authority for Deseret Bonanza, EPA compared the cost-effectiveness of the pollution control options to the cost-effectiveness of controls at other units in different source categories. After making that comparison, EPA rejected the top control as BACT for Deseret Bonanza based on the incremental cost-effectiveness being too high. (ASOF ¶¶ 348, 352.) MDNR has similarly rejected the top controls as BACT based on cost-effectiveness alone. (ASOF ¶¶ 349-54.)

Although DSI is undisputedly more cost-effective than scrubbers and Dr. Staudt agreed that an incremental cost of \$7,750/ton is too expensive to be BACT, Dr. Staudt did not conduct any of the required cost-effectiveness analysis as part of Step 4 of the top-down process. (ASOF ¶¶ 336-44.) Dr. Staudt had to ignore this step, because that is the only way he could arrive at scrubbers for BACT. To justify ignoring the key BACT decision making factor of cost-effectiveness, Dr. Staudt claimed that DSI cannot be compared to scrubbers, because a 50% removal efficiency based on DSI is not close to a 95% removal efficiency based on scrubbers. Dr. Staudt's reasoning finds no support in the draft NSR manual, which expressly requires a cost-effectiveness analysis, and is contrary to comparisons MDNR and permitting authorities make when determining BACT in the real world. (ASOF ¶¶ 347-60.)

Mr. Campbell explained that in the Archer Daniels Midland Columbus BACT determination, the Nebraska Department of Environmental Quality rejected the top control of wet scrubbers for SO₂ control at a coal-fired boiler based on incremental cost in favor of the bottom control of lime injection, which had an emissions rate 10 times higher than wet scrubbers. (ASOF ¶ 358.) In *ADEC*, the comparison was between controls with 30% and 90% removal efficiencies respectively. 540 U.S. 461, 466-67. While the Supreme Court found that ADEC's selection of the 30% control as BACT was inappropriate based on a lack of information

regarding cost-effectiveness, there was never any suggestion that it was inappropriate to compare cost-effectiveness of a 30% control against a 90% control, as Dr. Staudt claims is inappropriate to do in this case between 50% and 95% controls. *See id.* If Dr. Staudt was correct, and EPA's top-down process meant starting at the top control and stopping there if the top control is affordable, then EPA would never have reached the result it did in the Deseret Bonanza, and MDNR and the other state permitting authorities would never analyze cost-effectiveness as they routinely do. (*See* ASOF ¶¶ 347-60.) But when cost-effectiveness is considered for Rush Island, DSI at 50% SO₂ removal and an emission rate of 0.275 lb/MMBtu is easily selected as BACT over scrubbers. (*See* ASOF ¶ 362.)

c. **The Balancing of Other Costs of Control Options Against Alleged Harms Supports Installing DSI at Rush Island.**

Because determining BACT requires a case-by-case evaluation of “economic impacts and other costs,” 42 U.S.C. § 7479(3), the costs to the public should be considered when determining BACT for Rush Island. The Eighth Circuit has emphasized the cost to the public in determining the appropriateness of injunctive relief. In *Baker Elec. Co-op., Inc. v. Chaske*, 28 F.3d 1466, 1474 (8th Cir. 1994), the Eighth Circuit found that the public interest justified the reinstatement of a preliminary injunction enjoining the North Dakota Public Service Commission from interfering with a tribe's relations with a rural electric cooperative because the public would have to bear additional construction costs for the tribe to change its electricity provider.. The Eighth Circuit held that “the public's interest in minimizing unnecessary cost weighs in favor of reinstatement of the preliminary injunction.” *Id.*

Those certain real-world costs far outweigh the benefits of mitigating or remediating harm that is entirely uncertain and unproven. *See* Section I(A), *supra* (listing the uncertain benefits). As applied here, a BACT limit requiring the installation of scrubbers would result in

unreasonable costs, both in terms of dollars per ton of SO₂ reduced and incremental cost increase to Ameren's customers. (AFOF ¶ 362.) Instead, an injunction ordering installation of DSI at Rush Island would have much lower costs to remedy the purported harm. (*Id.*) The real-world costs of the injunction Plaintiffs seek far outweigh the uncertain benefits. Overall costs to ratepayers of installing scrubbers would exceed \$2.5 billion dollars, equating to thousands of dollars per customer. In contrast, for DSI, overall costs to ratepayers would be \$485 million—five times less than scrubbers—and only \$400 per customer. (AFOF ¶¶ 393, 395.) Moreover, the net reduction in SO₂ emissions, taking into account economic and dispatch effects throughout the market, would be substantially similar. (AFOF ¶¶ 396-399.)

Furthermore, the PSD program, pursuant to which the violations were found, does not mandate emissions reductions and instead balances clean air maintenance with economic growth. The PSD program “is designed to protect the Nation’s air quality in areas in which the air is relatively clean, while assuring economic growth consistent with such protection.” EPA SIL Brief at 4 (citing 42 U.S.C. § 7470). *See also Chevron, U.S.A., Inc. v. National Resources Defense Council, Inc.*, 467 U.S. 837, 851- 52 & n.25 (1984); AFOF ¶ 109. Consistent with this purpose, the Government has not shown that the harms attributed to the Rush Island “excess emissions” are more than *de minimis*. *Ala. Power*, 636 F.2d at 360. Thus, any costs greater than the DSI controls are excessive and inequitable.

V. The Lack of Fair Notice Argues for Exercise of the Court’s Equitable Discretion in Ameren’s Favor.

A. Fair Notice Legal Standards

“[I]t is a cardinal rule of administrative law that a regulated party must be given fair warning of what conduct is prohibited or required of it.” *Wisconsin Res. Prot. Council v. Flambeau Min. Co.*, 727 F.3d 700, 707 (7th Cir. 2013) (internal quotations omitted). “In the

absence of notice—for example, where the regulation is not sufficiently clear to warn a party about what is expected of it—an agency may not deprive a party of property by imposing civil or criminal liability.” *Gen. Elec. Co. v. United States EPA*, 53 F.3d 1324, 1328–29 (D.C.Cir.1995) (citations omitted).

The applicable standard to determine whether a given regulation provides fair notice is one of “ascertainable certainty.” In determining whether a party received fair notice, courts frequently look to the regulations and other agency guidance. “If, by reviewing the regulations and other public statements issued by the agency, a regulated party acting in good faith would be able to identify, with ascertainable certainty, the standards with which the agency expects parties to conform, then the agency has fairly notified a petitioner....” *Howmet Corp. v. EPA*, 614 F.3d 544, 553–54 (D.C.Cir.2010) (internal citations omitted).

The notice must come from the Agency itself, not some third party, and must be provided publicly to the defendant. “Agency guidance provided privately to a regulated entity other than the defendant also is insufficient because it does not permit the defendant to determine “with ascertainable certainty” what is required of him.” *See, e.g., Rollins*, 937 F.2d at 655 (Edwards, J., dissenting in part and concurring in part) (internal quotation marks omitted); *see also id.* at 653–54 (finding inadequate notice where the EPA’s regulatory interpretation was provided only in a letter to a private attorney, where “th[e] letter was never sent to [the defendant] or its attorneys and it was never made public”).

Even where a defendant has actual notice of EPA’s interpretation that is contrary to the text of a regulation, it is the regulation, not the contrary interpretation that controls. In *Cinergy*, the EPA submitted that there was no due process problem because the defendant “was ‘on notice’ that [the regulation] did not mean what it said.” *Cinergy Corp.*, 623 F.3d at 458. The

Seventh Circuit rejected this argument, holding that the defendant was only on notice of what “a straightforward reading of [the regulation] permitted.” *Id.*

If the EPA experts’ “regained hours” emissions projections test were binding on the regulated community, then that test should have been subjected to notice-and-comment rulemaking under the Administrative Procedures Act (“APA”), 5 U.S.C. § 500 *et seq.* Rules issued through the notice-and-comment process are often referred to as “legislative rules” because they have the “force and effect of law.” *Chrysler Corp. v. Brown*, 441 U.S. 281, 302–303 (1979) (internal quotation marks omitted); *see also* 5 U.S.C. §§ 551, 553 (defining “rule” and describing three-step process for notice-and-comment rulemaking); 83 Fed. Reg. 57324, 57328 (Nov. 15, 2018) (EPA defining its use of the term “rule” to refer to a “legislative rule,” which is “[a]n agency action that purports to impose legally binding obligations or prohibitions on regulated parties—and that would be the basis for an enforcement action for violations of those obligations or requirements.”) (quoting *National Mining Association v. McCarthy*, 758 F.3d 243, 251–52 (D.C. Cir. 2014)).

Not all “rules” must be issued through the notice-and-comment process, however, and there are alternative ways to make the public aware of an agency’s position. As stated in Section 4(b)(A) of the APA, unless another statute states otherwise, the notice-and-comment requirement “does not apply” to “interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice.” *Perez v. Mortg. Bankers Ass’n*, 135 S. Ct. 1199, 1203–04 (2015) (citing 5 U.S.C. § 553(b)(A)). *See also* 83 Fed. Reg. at 57328 (EPA describing that the terms “rule,” “interpretation,” and “policy” “refer to three distinct types of agency action that have varying degrees of legal effect and can be changed through different types of procedures”). Yet even EPA has acknowledged that its use of those different terms to refer to rules or

guidance, such as its “2009 NSR Aggregation Action,” and “the distinction between the proper procedures for changing rules, interpretations, and policies *were not as clear to the agency in 2009 and 2010 as they are today.*” *Id.* (emphasis added).

Interpretive rules “do not have the force and effect of law and are not accorded that weight in the adjudicatory process[,]” but they are “issued by an agency to advise the public of the agency’s construction of the statutes and rules which it administers.” *Shalala v. Guernsey Memorial Hospital*, 514 U.S. 87, 99 (1995) (internal quotation marks omitted).⁸ EPA has defined an “interpretation” to describe “‘an agency action that merely interprets a prior statute or regulation, and does not itself purport to impose new obligations or prohibitions or requirements on regulated parties.’” 83 Fed. Reg. at 57328 (quoting *National Mining Ass’n*, 758 F.3d at 251–52). *See also Appalachian Power Co. v. E.P.A.*, 208 F.3d 1015, 1021 (D.C. Cir. 2000) (noting that “policy statements” can be rules within the meaning of the APA and the Clean Air Act though they are not the type of “rules” subject to notice-and-comment rulemaking, “[i]f an agency acts as if a document issued at headquarters is controlling in the field, . . . [and] if it bases enforcement actions on the policies or interpretations formulated in the document”) (describing that “[t]hrough [EPA’s Periodic Monitoring] Guidance, EPA has given the States their ‘marching orders’ and EPA expects the States to fall in line”).

Apart from legislative and interpretive rules, other agency pronouncements can put parties on notice of the agency’s interpretations. For example, an interpretive letter can provide

⁸ An example of an interpretive rule is EPA’s December 7, 2017 Memorandum re: *New Source Review Preconstruction Permitting Requirements: Enforceability and Use of the Actual-to-Projected Actual Applicability Test in Determining Major Modification Applicability* (Dec. 7, 2017), https://www.epa.gov/sites/production/files/2017-12/documents/nsr_policy_memo.12.7.17.pdf.

actual notice. *See United States v. Hoechst Celanese Corp.*, 128 F.3d 216 (4th Cir.1997), *cert. denied*, 524 U.S. 952 (1998) (where EPA sent a specific interpretive letter to the defendant, receipt of that letter, in combination with subsequent meeting minutes demonstrating that the defendant understood the interpretation, provided actual notice of the interpretation and thus defeated a fair notice defense). Or an agency might provide regulated parties with notice of a guidance document filed through the Federal Register. *See Cmty. Health Sys., Inc. v. Burwell*, 113 F. Supp. 3d 197, 229–30 (D.D.C. 2015) (describing that program participants could have been alerted to Medicare policy by publication of “audit guidelines” in the Federal Register). Or an agency may do a combination of these methods to provide notice to the public. *See United States v. Duke Energy Corp.*, 278 F. Supp. 2d 619, 637 (M.D.N.C. 2003) (“Through the EPA’s statements in the Federal Register, its statements to the regulated community and Congress, and its conduct for at least two decades the EPA . . . established an interpretation of RMRR under which routine is judged by reference to whether a particular activity is routine in the industry.”).

The salient point here is that EPA used none of these methods to provide notice to Ameren (or the regulated public) of its regulatory interpretations that it relied on in the liability phase. Instead, the interpretations were “issued” by EPA’s trial counsel during litigation, an approach that cannot constitute fair notice because it comes years after Ameren acted in reliance on the rules that had been publicly issued. If the rules are not announced by the regulator until after the game is played, they cannot fairly bind the parties.

B. EPA Failed to Provide Fair Notice to Ameren.

During the liability trial, EPA’s trial counsel argued for legal interpretations of the NSR regulations that either lacked ascertainable certainty, or that EPA in its regulatory capacity never announced to the public. As described below, these interpretations were not set forth in the statute or regulations, and they were not the subject of any of the other means, entitled to greater

or lesser deference, by which a regulatory agency can provide its interpretation to the public.

They were announced for the first time in this litigation, some on the eve of trial (after discovery had been completed), and some only after the trial had taken place, in post-trial briefing. While litigation interpretations are entitled to little or no deference, interpretations that are offered only after discovery or a trial should not be given any weight. Even if adopted as the applicable legal standard, as they were here, the lack of fair notice of these legal standards is a factor that the Court ought to consider in determining the nature and extent of injunctive relief in this remedy phase.

There are five instances in which Ameren lacked fair notice of the law applied in this case:

- (1) the NSR regulations' directive that sources "shall consider all relevant information" in projecting emissions fails, on its face, to provide ascertainable certainty;
- (2) as applied in this case, the application of the "all relevant information" approach used by EPA's experts failed to give Ameren fair warning of what the Agency required because it relied on the personal judgments of litigation experts instead of a directive from the regulator;
- (3) EPA failed to provide any warning that the "demand growth exclusion" would be applied by looking to growth in demand for the electricity produced by Rush Island in particular;
- (4) EPA failed to provide any warning of its "Restaurant" interpretation of the "demand growth exclusion," *i.e.*, that in determining the amount of emissions a unit "could have accommodated," the regulations require an analysis of a unit's maximum available capacity during unspecified past periods of high demand; and
- (5) EPA's insertion of a single sentence in its publication notice of the 2007 Missouri SIP did not provide Ameren with fair notice that the plain language of the SIP as written would not apply; and EPA's attempt to change the SIP in this manner was ineffective as a matter of law.

1. **On its Face, the “All Relevant Information” Standard for Emissions Projections Does Not Provide “Ascertainable Certainty.”**

Neither the CAA nor the NSR regulations set forth a required method or means of calculating projected actual emissions, for purposes of determining whether a particular project will result in a significant net emissions increase. Instead, the regulations merely provide that, when determining such projected actual emissions, the source “shall consider all relevant information.” 40 CFR 52.21(b)(41)(ii)(a). While that section of the regulations sets forth examples of the *types* of information a source should “consider,” the regulations do not tell the source how to consider or evaluate that information. On its face, that standard does not constitute fair notice, because a regulated party would not be able to identify, with ascertainable certainty, how to determine projected actual emissions in a way that complies with the regulation.

A regulation that requires a source to “consider all relevant information,” without providing specific direction about what information to consider and how to consider it, cannot satisfy the “ascertainable certainty” standard. As the Court is aware from both phases of this trial, there is a massive body of information in the electric power industry that could be relevant to a projection of future operations and emissions. Information regarding market demand, generation dispatch by the independent system operator (MISO), electricity prices and supply, unit operational status, utility business plans, maintenance schedules for the unit at issue and others, coal prices, coal quality and composition data, and the availability of other generating units are just a handful of the literally thousands of parameters that could be considered in arriving at a projection of future emissions.

The NSR regulation provides a non-exhaustive list of categories of information to consider, but does not say whether any must be considered, whether any must be ignored, or

even require that “considered” information be used to reach a conclusion. This provides no guidance to regulated parties.

Indeed, it is the same ambiguous use of the phrase “relevant information” that is currently on review by the United States Supreme Court in the administrative deference setting. *See Kisor v. Shulkin*, 869 F.3d 1360 (Fed. Cir. 2017), *cert. granted in part sub nom. Kisor v. Wilkie*, 139 S. Ct. 657, 202 L. Ed. 2d 491 (2018).

EPA argued for, and the Court adopted, the “reasonable power plant operator” standard, EPA’s litigation gloss on the “consider all relevant information” standard. But the RPPO standard is not found in the NSR regulations or the Missouri SIP. EPA has issued no public guidance or other directive regarding what it means or how to apply it. EPA’s 30(b)(6) witness admitted that EPA did not know what the RPPO standard means:

Q. [I]n using the term “reasonable power plant operator,” EPA is not referring to a specific definition in the electric industry of what a reasonable power plant operator is or does or how it behaves?

A. I’m not [EPA is not] aware of what that would be pointing to.

(Jan. 29, 2014 Emissions 30(b)(6) Dep. Tr. of D. Lloyd at 126:15-21; *see also id.* at 119-126.)

If EPA does not know and cannot say what it means by its own “reasonable power plant operator” standard, then the regulated public certainly cannot have fair notice of it.

2. **As Applied Here, the “All Relevant Information” Standard Did Not Give Ameren Fair Notice of How to Determine Projected Actual Emissions.**

In addition to the lack of ascertainable certainty in the language of the regulation, the lack of fair notice is exacerbated here because EPA’s evidence of an emissions increase consisted wholly of the personal judgments of paid litigation consultants, based on their own personal interpretations of the “consider all relevant information” language of the regulation. EPA’s approach allowed these paid consultants to usurp the Agency’s role—supplying the standards

that the Agency failed to provide—and to do so years after the fact, for the first time in litigation. This failed to provide fair notice because notice must come from the Agency, not outside consultants; must be provided before, not after, the conduct at issue; and must consist of published standards that provide the regulated public with ascertainable certainty, not the unannounced judgment of a hired witness.

During the liability phase, EPA’s trial counsel offered the testimony of Robert Koppe, Ranajit Sahu and Ezra Hausman to establish the emissions portion of its case. All three are independent consultants; none of them have ever worked for EPA. They each presented opinion testimony that, in their judgment, Ameren should have expected a significant emissions increase to result from the Rush Island Projects. Their opinions were based on methods that, as EPA admitted, were not found in any EPA regulation, guidance, or interpretive statement.⁹

For example, Mr. Koppe and Dr. Sahu relied wholly on their own judgment to: (1) determine what information was “relevant” in their view and thus ought to be considered; (2) what information was not “relevant” and thus ought to be ignored; (3) how to consider the relevant information; and (4) how to translate the information into a calculation method for projecting future emissions. Dr. Hausman likewise relied on his professional judgment, using an analytical method that he admitted was not required to be used, and that he himself had never

⁹ Ameren objected repeatedly to EPA’s use of a projection method that was not required by the regulations being used as the yardstick against which to measure Ameren’s own compliance. See ECF Nos. 543 & 545, Ameren’s Motion for Summary Judgment No. 2 (Liability Phase) and accompanying memorandum; ECF Nos. 527 & 529, Ameren’s Daubert Motion Regarding Mr. Koppe and accompanying memorandum; ECF Nos. 532 & 533, Ameren’s Daubert Motion Regarding Dr. Sahu and accompanying memorandum.

before used to project emissions. This expert testimony was the only basis offered by EPA for finding a significant net emissions increase.

The lack of fair notice is demonstrated here by EPA's own conduct in prosecuting this case. Because the regulations do not set forth a standard for determining projected actual emissions, Ameren repeatedly asked EPA how it arrived at its conclusion that emissions should increase, in other words, the very application of its regulatory standard to the facts at issue. EPA refused to provide Ameren with its emissions analysis until years into this litigation. If the applicable legal standards were fairly disclosed in EPA's regulations or elsewhere, there would have been no reason for Ameren to ask for EPA's analyses, and no reason for EPA to hide them.

The first time Ameren sought EPA's analyses was when EPA issued its Notice of Violation to Ameren regarding the Rush Island Projects and numerous other projects at Ameren's plants in January 2010. EPA had conducted two years of investigation by that point. At that time, Ameren asked EPA to provide the basis for its Notice – the emissions calculations that showed a significant emissions increase should have been expected. EPA refused.

After EPA filed this suit, Ameren issued a Freedom of Information Act ("FOIA") request to EPA again seeking its emissions calculations. *See Ameren Missouri v. United States E.P.A.*, Case No. 4:11-cv-02051-AGF, ECF 1, Complaint. EPA again refused to provide them, claiming they were protected as enforcement-sensitive material. *Id.* Ameren then filed a FOIA lawsuit; in opposing Ameren's request for relief, EPA said that a source should not be allowed to know how EPA arrived at its calculations under the regulations. *Id.*, ECF 34-8, Declaration of Mark A. Smith. EPA's trial counsel even stated in open Court that "Ameren is learning what the law is" through litigation: Judge Fleissig asked EPA, "Why shouldn't Ameren be able to learn why you have decided that it is the subject to a notice of violation?" EPA's counsel responded, "From the

Government's perspective, Ameren is learning that through the Clean Air Act litigation." *Id.*, July 26, 2010 Hearing Tr. at 61:8-12. Learning what the legal standards are only after you have been sued is the definition of a lack of fair notice.

After EPA filed this litigation, Ameren asked for a third time, during fact discovery, for EPA's emissions calculations. EPA refused to provide them, this time claiming attorney-client privilege. The issue was argued extensively at a December 19, 2012 hearing: "MR. SAFER: Where is that methodology? We don't know what that is. We have no idea what that methodology is. ... So we don't have the first clue as to what the formula is for that." ECF No. 117, 12/19/2012 Hrg. Tr. at 13; *see id.* at 1-22. EPA's trial counsel said that the analysis would not be disclosed until its expert reports were due; and it was not until then that Ameren first saw the standard for determining projected actual emissions that EPA would apply in this case, when its hired litigation witnesses put forth opinions on emissions increases, capacity increases, demand growth using standards that were never announced in any EPA statute, rule, guidance, or interpretation.

It cannot simultaneously be true that EPA's standards for determining whether a significant emissions increase would be expected—the very basis for EPA's claims—are both privileged and cannot be learned by Ameren, and at the same time that Ameren had fair notice of those same standards. Of course, it would have been easy for EPA to provide fair notice. If Dr. Sahu's and Mr. Koppe's emissions method was the one EPA required power plant operators to use, all EPA had to do was say so. It had the power of the pen. But it chose not to use it.

3. **Ameren Lacked Fair Notice of EPA's Interpretation of the Demand Growth Provision as Requiring Proof of Increased Demand for Rush Island's Electricity in Particular.**

To determine whether a given construction project undertaken at a unit will result in a significant increase in emissions, it is necessary to determine "projected actual emissions," by

excluding any increased emissions that are the result of growth in market demand (or otherwise unrelated to the Project) and that could have been accommodated during the consecutive 24-month baseline period. 40 CFR 52.21(b)(41)(i) and (ii). The provision that requires the exclusion of unrelated emissions that could have been accommodated during the baseline is generally called the demand growth provision.

In the liability phase trial, EPA interpreted the demand growth provision to mean that emissions associated with demand growth can only be excluded from the calculation if the growth in demand is *particular to the specific electric generating unit in question*; growth in demand for electricity produced by the system as a whole is irrelevant. But the regulations do not say that; the electricity markets do not function that way; and before trial, EPA had never interpreted the demand growth provision in that manner. Indeed, EPA in prior public statements and in prior litigation had consistently interpreted it to mean that it was demand on the system as a whole that mattered.

It was in the 1992 WEPCo rule that EPA first promulgated the demand growth exclusion, as part of its promulgation of an actual-to-projected actual test for electric utilities. The WEPCo rule itself is silent on the nature of demand required, but the preamble to the rule requires only proof of system-wide demand growth; twice stating that system-wide demand growth is “independent,” “unrelated,” and is an example of a factor that “do[es] not result from” the project:

[W]here increased operations are in response to independent factors, such as system-wide demand growth, which would have occurred and affected the unit’s operations even in the absence of the physical or operational change, such increases do not result from the change and shall be excluded from the projection of future actual emissions.

Thus, in assessing whether the proposed change will result in an increase in actual emissions, utilities need not include in their projection of post-change utilization that portion of the increased rate of utilization, if any, due to factors unrelated to

the physical or operational change, such as an increase in projected capacity utilization due to the rate of electricity demand growth for the utility system (of which that source is a member) as a whole.

57 Fed. Reg. 32,314, 32,326 (July 21, 1992) (emphases added).

Thus, when issuing the WEPCo rule, EPA stated that it was system-wide growth that mattered. To be sure, the language makes clear that the source must be a member of the same system that experiences a growth in demand. In other words, Ameren was required to show demand growth within Missouri and/or MISO -- “the utility systems” “of which [Rush Island] is a member.” That makes sense – demand growth in other systems would not “affect” Rush Island’s “operations.” When it promulgated the 2002 NSR Reform Rules (the version of the federal rules that apply in this case), EPA explicitly confirmed that sources could continue to apply the demand growth provisions just as they had been applied under the WEPCo Rule. 67 Fed. Reg. 80,186, 80,203 (Dec. 31, 2002).

EPA has repeatedly construed the law to mean the opposite of what it now argues. In a prior case, EPA gave a Rule 30(b)(6) deposition on the demand growth exclusion, and testified with perfect clarity that demand on the unit is not the test:

Q. Okay. When you say it [the emission calculation] can take into account what’s called the emissions attributable to demand growth, how does it do that?

A. What the rule provides is to exclude, subtract from the projection of future emissions any part of that emissions as can be attributable to demand growth, where “demand growth” refers to what the utility expects to be required to produce in the way of energy system wide, **not for a single unit, but system wide.**

Rule 30(b)(6) Dep. of James Little in *United States v. East Ky. Power Coop.*, No. 5:04-cv-0034-KSF (July 20, 2005) at 13:5 – 13:16.

In the Cinergy NSR litigation, EPA interpreted the demand growth provision to need only a showing of system-wide demand growth, telling the district court both “if increased emissions

from a unit result solely from independent factors, such as projected system-wide demand growth, and if those emission increases would have occurred in the absence of the physical change, then such increases do not result from the physical change and may be excluded from the post-activity emissions projections” and “system-wide demand growth . . . shall be excluded from the projection of future actual emissions.”¹⁰ Ameren’s post-trial briefing in the liability phase summarized other instances where EPA has similarly interpreted the demand growth provision. *See* ECF 835, Ameren’s Rule 52(a) Brief – Corrected Proposed Conclusions of Law at 12-17; ECF 839, Ameren’s Opposition to EPA’s Post-Trial Brief and Proposed Conclusions of Law, at 44-49.¹¹

4. **Ameren Lacked Fair Notice of EPA’s “Restaurant” Interpretation of the Demand Growth Provision.**

During oral argument on the liability-phase summary judgment motions, EPA litigation counsel put forth an interpretation of the “could have accommodated” prong of the demand growth provision that is not found in the regulation or in any public EPA statement or interpretive guidance about the demand growth provision. The interpretation was advanced for the first time by EPA litigation counsel in this case. The interpretation was based on an analogy

¹⁰ Mem. in Support of Pl. the United States’ Mot. for Summ. J. on the Demand Growth Exclusion at 9, *U.S. v. Cinergy Corp.* (Civil Action No. IP99-1693 C-M/S), 2005 WL 2608841 (S.D. Ind. Aug. 18, 2005); Pl. the United States’ Reply Mem. in Support of Mot. for Summ. J. on the Demand Growth Exclusion at n.3, *U.S. v. Cinergy Corp.* (Civil Action No. IP99-1693 C-M/S), 2005 WL 3122965 (S.D. Ind. Oct. 17, 2005) (quoting 57 Fed. Reg. at 32,326; emphasis by the United States).

¹¹ EPA conceded at the liability trial that system-wide demand growth occurred, and Ameren conclusively proved that the amount of the system-wide demand growth exceeded the projected increase in operations and emissions. ECF 835 at 19-22; ECF 839, Ameren’s Opposition to EPA’s Post-Trial Brief and Proposed Conclusions of Law at 47-48.

to a restaurant: EPA argued that unused capacity during off-peak hours is irrelevant in determining the amount of emissions a unit could have accommodated in the baseline period, because just like a restaurant that has empty tables at 3 PM, a power plant that has unused generating capacity in the middle of the night does not use its unused capacity.

Because it was never explained by EPA before this litigation, and never offered for public comment, it is entirely unclear how the Restaurant interpretation would be applied by a source when attempting to determine projected actual emissions under the NSR regulations. It is not even a cognizable standard at all; it is at best a vague argument attacking Ameren's analysis.

The Restaurant interpretation says nothing about how to apply the rules, and for that reason it utterly fails the "ascertainable certainty" standard. What analysis is required? When determining what emissions could have been accommodated during the baseline period, what period of "peak demand" does the source examine? The highest month? The highest week? EPA does not say; leaving it open to change with every situation. Regulated parties would have no idea how to apply it. This is the very opposite of fair notice.

The regulation, again, says the opposite of what EPA's trial counsel argued. The text of the demand growth provision tells sources to look not to the period of greatest demand, but rather the entire baseline period: "the consecutive 24-month period used to establish the baseline actual emissions[.]" *See* ECF No. 835 at 38-42 (Ameren's Liability-Phase Proposed Conclusions of Law). The Restaurant interpretation was also directly contrary to numerous other EPA approaches for determining the amount of emissions that a unit could have accommodated. *See id.* at 46-47 and ECF 833 at 136-144 (Ameren's Liability-Phase Proposed Findings of Fact).¹²

¹² EPA offered no evidence at trial to support the Restaurant Analogy. It did not show that Ameren lacked capacity at any point in time. None of EPA's expert witnesses performed such

Yet the Court adopted EPA's Restaurant interpretation and used it to set the legal standard for the application of the demand growth provision. ECF 852, Liability Memorandum Opinion and Order, at 175; *see also id.* at 166, n. 17. Ameren lacked fair notice because this interpretation of the demand growth provision had never before been announced, and was contrary to other EPA approaches to the same issue. And as shown above, even when EPA did announce the Restaurant interpretation for the first time, EPA's litigation counsel utterly failed to set forth any cognizable standard, and thus failed to satisfy the "ascertainable certainty" test.

5. EPA's Approval of the 2007 Missouri SIP Did Not Provide Ameren with Fair Notice that the Plain Language of the SIP as Written Would Not Apply.

Under the Missouri State Implementation Plan ("SIP"), Ameren was obligated to obtain a construction permit for the Rush Island projects only if the SIP's Construction Permit Rule applied to them, as determined by the Rule's threshold Applicability provision, Section 10-6.060(1)(C). The Applicability provision states that the Construction Permit Rule only applies to prohibit "construction" or "modification" of installations without a permit, as those terms are defined in 10 CSR 10-6.020, the SIP's definitions section. The plain language of the SIP defines "modification" at 10 CSR 10-6.020(2)(M)(10) to mean a physical change or change in the method of operation that increases the unit's potential to emit, not its actual emissions. EPA never alleged, in words or in substance, that the Projects at issue were "construction" or "modification." The undisputed facts showed that the Rush Island Projects would not increase

an analysis. Ameren's experts Ms. Ringelstetter and Mr. Hamal both showed that Ameren had considerable excess unused capacity throughout the baseline period. ECF 835 at 40-41; ECF 833, Ameren's Liability-Phase Proposed FOF at 35-37, 101-102, 112-113, 185.

the units' potential to emit. *See generally* ECF Nos. 539 & 542, Ameren Liability Phase Motion for Summary Judgement No. 1 and accompanying memorandum.

The SIP thus differs from the regulations promulgated by EPA in the federal version of the NSR regulations. That is perfectly appropriate. The Supreme Court has made clear that Missouri has "wide discretion in formulating [its] [state implementation] plan." *Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976). "Congress recognized that [Missouri] was in the best position to determine how best to achieve the national goals in light of local needs and conditions." *U.S. v. Ford Motor Co.*, 736 F. Supp. 1539, 1542 (W.D. Mo. 1990). Accordingly, had EPA believed the SIP did not comply with the Act, well-settled administrative procedures were available to change its language. *See* 42 U.S.C. § 7410(k)(5).

But EPA argued for, and the Court accepted, an interpretation of the SIP that was different from its plain language meaning. EPA argued that when publishing in the Federal Register its approval of the Missouri SIP, EPA claims to have conditioned its approval on the fact that Missouri was incorporating 40 C.F.R. § 52.21 by reference, so that definitions in 40 C.F.R. § 52.21(b) would supersede the SIP's own definitions. ECF No. 711 at 12 (citing 71 Fed. Reg. 36,489 (June 27, 2006)). But Missouri did not do that; indeed, it specifically requested EPA's earlier request to do so. And EPA's statements in its publication notice could not, as a matter of law, circumvent the statutorily-required SIP approval process. Nor could EPA unilaterally override Missouri's policy choices, let alone by means of a single sentence added to a notice on which Missouri has no input.

Indeed, Supreme Court and Circuit Court case law confirm that when reviewing a proposed SIP, EPA's role is tightly constrained: it must approve Missouri's preferred SIP, provided it meets the minimum requirements. "[S]o long as the ultimate effect of [Missouri's]

choice of emission limitations is in compliance with the national standards for ambient air [the NAAQS], [Missouri] is at liberty to adopt whatever mix of emission limitations it deems best suited to its particular situation.” *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 79 (1975). The Act “confines the EPA to the ministerial function of reviewing SIPs for consistency with the Act’s requirements.” *Luminant Gen. Co., L.L.C. v. EPA*, 675 F.3d 917, 921 (5th Cir. 2012). Congress limited EPA’s authority because the state has “primacy” over EPA regarding the “terms of the SIP.” *Concerned Citizens of Bridesburg v. EPA*, 836 F.2d 777, 779 (3d Cir. 1987). The Act gives EPA “no authority to question the wisdom of [Missouri’s] choices.” *Train*, 421 U.S. at 79.

When EPA approved the SIP in 2006, it specifically confirmed that Missouri’s proposed SIP provisions were compliant: “EPA believes that the revisions meet the substantive SIP requirements of the CAA, including section 110 [42 U.S. § 7410] and implementing regulations.” 71 Fed. Reg. at 36,488.

The administrative record of the SIP approval process confirms that: (1) EPA knew that Missouri’s proposed SIP had “definitions and other provisions” that were “not identical” to those in the federal version of the regulations, 40 C.F.R. § 52.21; (2) Missouri realized it too, and made an intentional choice to keep those different definitions and provisions, because Missouri prioritized “regulatory certainty” for Missouri sources; and (3) EPA approved the SIP even though it was fully aware of those differences, because Congress has afforded Missouri’s choices “primacy” under the Act.

These points are demonstrated in EPA’s Technical Support Document (“TSD”), which EPA simultaneously issued with its approval. After Missouri initially proposed the SIP, there was a public comment period, and EPA was one of the commenters. EPA suggested that

Missouri should “add a sentence stating that the provisions of 40 C.F.R. § 52.21 *override any conflicting provisions or definitions* in the existing [Construction Permit] rule.” Missouri’s Order of Rulemaking, 29 Mo. Reg. 1756 (Nov. 1, 2004) (emphasis added); *see also* Apr. 6, 2006 Tech. Support Doc., EPA-R07-OAR-2006-0287 at EPA7_AME797768-9. But Missouri specifically rejected EPA’s request. As EPA reported in the TSD, “MO did not add this sentence. In the ‘Order of Rulemaking’ MO states, ‘Certain definitions and other provisions that are not identical to those in the federal regulations were intentionally retained in the interest of regulatory certainty.’” *Id.*; *see also* 29 Mo. Reg. 1756 (Nov. 1, 2004). The TSD confirms that there was “[n]o rule change as a result of this comment.”

Under the CAA, EPA may either approve or disapprove the proposed SIP in its entirety. 42 U.S. Code § 7410. If EPA disapproves, it sends the SIP back to Missouri to revise. If it approves, then Missouri’s choices and proposed rules become law. But the Clean Air Act does not give EPA the choice to “approve with a caveat” – particularly where the caveat undoes Missouri’s policy choices and changes the plain meaning of the regulatory language Missouri selected.

If Missouri’s choices did not comply with the Act, EPA was required to reject them. Instead, EPA approved the SIP with those differences intact, and expressly confirmed the SIP was consistent with the Act, even though EPA knew that Missouri had rejected EPA’s request to have the “provisions of 40 C.F.R. § 52.21 override any conflicting provisions or definitions” in the existing Construction Permit rule.

In its ruling denying Ameren’s liability-phase Motion for Summary Judgment No. 1, the Court relied on *Auer v. Robbins*, 519 U.S. 452, 461 (1997) to defer to EPA trial counsel’s litigation interpretation of the SIP. ECF No. 711 at 13-14 (also citing *Chevron U.S.A. Inc. v.*

Natural Resources Defense Council, Inc., 467 U.S. 837, 842–843 (1984). But as the Eighth Circuit has held when rejecting a prior EPA request for deference in interpreting a SIP, deference is unavailable when the SIP’s meaning is apparent from its plain language. *Otter Tail*, 615 F.3d at 1018 n.7 (8th Cir. 2010); *U.S. v. EME Homer City Generation, L.P.*, 727 F.3d 274, 291 n.17 (3d Cir. 2013) (same). EPA—the Agency—never interpreted the Missouri SIP before its counsel did in this litigation; so EPA is not entitled to *Auer* deference. “We have declined to give deference to an agency counsel’s interpretation of a statute where the agency itself has articulated no position on the question....” *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 212 (1988). In addition to the Eighth Circuit’s rejection of an EPA request for deference in litigation in *Otter Tail*, similar arguments for deference to EPA’s litigation interpretations of a state’s SIP in an NSR case were properly rejected in *United States v. Cinergy*, 623 F.3d 455 (7th Cir. 2010). To impose liability when it is undisputed no “modification” has occurred would violate basic principles of due process and fair notice. *See Wisconsin Res. Prot. Council v. Flambeau Mining Co.*, 727 F.3d 700, 707-8 (7th Cir. 2013).

C. The Court Should Consider Fair Notice Issues in Fashioning any Remedy.

The lack of fair notice on the issues described above provides sufficient basis to enter judgment for Ameren and deny all relief to Plaintiffs, as other courts have done in similar situations, even after a full bench trial on the merits. *See, e.g., Flambeau; Cinergy*. But even if the Court declines to do so, the lack of fair notice is a strong equitable consideration in determining a fair remedy.

Ameren understands that in the liability phase, at the request of EPA’s trial counsel, the Court made several determinations about the legal standards that apply to this case, as discussed above. To be sure, Ameren disagreed with the interpretations offered by EPA’s counsel on the

merits, and believes the Court should have ruled differently. But Ameren is not now re-litigating those decisions. The question of whether Ameren had fair notice of the law is entirely separate.

Many of the issues decided by the Court were issues of first impression, not just in this District or Circuit, but in the entire country. For example, no Court had previously interpreted the “Applicability” provisions of the Missouri SIP. No Court had previously interpreted the demand growth issues raised above. No Court has considered whether the “consider all relevant information” and “reasonable power plant operator” standards provide ascertainable certainty to the regulated public.

Ameren is not required to demonstrate that knowledge of the law, as interpreted by the Court, would have made a material difference. But here, the difference was absolutely material. Regarding the Court’s interpretation of the Missouri SIP provision, if the Court had applied the plain meaning of the regulation, and not adopted EPA’s litigation interpretation, the case would have been decided for Ameren years ago. There was no factual dispute, and EPA did not disagree, that the plain language of the regulation would have resulted in dismissal. ECF No. 711 at 15 (“EPA does not directly challenge Ameren’s ‘straightforward reading’ of the SIP language...”).

The other issues discussed above pertinent to the determination of projected actual emissions were just as material to the outcome. If, at the time of the Rush Island Projects, Ameren had knowledge of the law on those issues (as later interpreted by the Court), and concluded, as the Court did, that the Projects would be expected to result in a significant emissions increase, then Ameren could have acted differently.

The NSR/PSD program merely seeks to prevent emissions increases, and does not require reductions. In the liability trial, Dr. Sahu’s projected emissions increases were relatively small –

just 3-6% more than baseline actual emissions. With projected increases that small, avoiding increases would have required relatively small changes to avoid the increase. Ameren could have obtained a minor permit and, as Mr. Campbell testified, taken any one of a number of measures to prevent the occurrence of a significant emissions increase: limiting operations, switching to lower-sulfur fuel (which Ameren did just a few years later in any event), or installing a DSI system and operating it at a low removal efficiency (much lower than the 50% Ameren proposes as a compliance remedy now). All of these options would have been orders of magnitude less expensive and easier to implement than any of the remedies Plaintiffs propose now.

That result would not just have been better for Ameren but for the public and the environment as well. Emissions would have been reduced from the pre-project levels, which were indisputably lawful. Ratepayers would have saved considerable money over the options now before the Court. The lack of fair notice was detrimental to everyone concerned, not just Ameren.

If the Reasonable Power Plant Operator standard applies, then any RPPO would have pursued the minor permitting option, as demonstrated by the uncontested fact at trial that no existing power plant in the country, in the four decades of the PSD program, has ever obtained a PSD permit for SO₂.

It would be manifestly unfair to apply the RPPO standard to determine the liability phase of the case but not the remedy phase of the case. If the legal test allows EPA to effectively go back to the time of the Projects to second-guess Ameren's emissions projections—by determining whether a RPPO would have projected an increase—then in fairness the legal test ought to go back to the time of the Projects to determine what that same RPPO would have done

in terms of securing a permit. And there can be no reasonable dispute about what would have happened: No reasonable operator would install \$1 billion in controls just so it could carry out a project that was worth \$30-40 million, when the option of taking a minor permit, at a small fraction of the cost, was available.

The Court should take these points into account when determining a fair and equitable remedy, particularly in light of the goals of the PSD regulation. The PSD program exists to prevent significant deterioration—not to require significant emissions decreases. The goal of the PSD program would have been met with a minor permit that required Ameren to take actions to prevent the Rush Island projects from resulting in a significant emissions increase. That goal can still be met with a remedy order that requires the installation of DSI at 50% removal efficiency. Ameren has already switched to lower sulfur fuel, resulting in Rush Island emissions being far lower than baseline levels in almost every year since the Projects. Ordering Ameren to obtain a minor permit, and requiring the installation of DSI at 50% removal will achieve compliance with the PSD regulations and the goal of the program. To the extent that the Court determines mitigation is available under the law, and appropriate, Ameren should be ordered to surrender SO₂ allowances under CSAPR.

Dated: May 23, 2019

/s/ Matthew B. Mock

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CERTIFICATE OF SERVICE

I hereby certify that on May 23, 2019, I caused the foregoing document to be electronically filed with the Clerk of Court using the CM/ECF system, which will cause an electronic copy to be served on all counsel of record.

/s/ Matthew B. Mock

Matthew B. Mock